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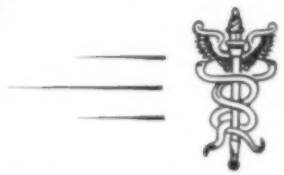

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VOLUME XXXV • OKLAHOMA CITY, OKLAHOMA, APRIL, 1942 • NUMBER 4

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VOLUME XXXV OKLAHOMA CITY, OKLAHOMA, APRIL, 1942 NUMBER 4

Fever Therapy*

PATRICK S. NAGLE, M.D.
OKLAHOMA CITY, OKLAHOMA

Fever therapy is a therapeutic modality of definitely established effectiveness. Its effectiveness varies from increasing the tempo of healing in self-limited diseases to arrestation of progress of incurable chronic disorders, and sometimes complete elimination or "cure" of certain diseases which lend themselves to no other manner of treatment.

Proper appreciation of it is slowly but definitely developing in the general ranks of medicine. This slowness could be discussed at length but such discussion is irrelevant. Much debate, usually burdened by rationalization and casuistry, is prevalent today as to "which" is the "best" manner of inducing artificial fever. I shall not indulge in this today.

Suffice to say, the particular technique that I shall talk about is the one with which I have had experience. By restricting my statements to data and opinions arising directly out of my immediate experience, it is hoped that the presentation will be positive and not negative, affirmative and not disputative.

In the Department of Fever Therapy at St. Anthony hospital, and in the Coyne Campbell sanitarium, fever is induced in the patient by electrical inductance. Elaborate discussion of the technicalities of this does not seem appropriate at this time. Most significantly it may be said, that by the employment of ultra short wave radio waves the fever induced in the subject is completely controlled. The temperature may be taken to any heighth deemed appropriate by the referring physician and maintained at any level for any length of time that the nature of the disease and the condition of the patient permits. The continuance and the progress of the fever may be stopped at any moment. In the experience of this writer, this is a matter of no trivial importance. For here, as in other radical and vigorous therapeutic procedures, the mortality of the treatment as well as the mortality of the disease must be given recognition.

Fever therapy is no novelty, although it has been exploited as such by some. It is no recent innovation in medicine and it has very definite and specific applications and appropriate uses. It is not a cure-all.

I shall list a few situations in which it is outstandingly the therapy of choice. Too frequently in these cases, it is the therapy of ultimate choice rather than first choice. I urge its earlier use.

The first condition I wish to mention is syphilis of the central nervous system. Asymptomatic sero-positive neurosyphilis may most effectively be treated by controllable artificial fever therapy in repeated courses of ten weekly treatments over a period of years. Paresis and taboparesis are ameliorated in their progress and frequently arrested by adequate fever therapy. Occasionally we see a reversal of the serology. Tabes dorsalis gives us the most dramatic proof of the effectiveness of this modality in disorders of syphilitic etiology. Here it has been observed that a patient in unremitting gastric crisis requiring hospitalization, heavy morphine sedation, and intravenous fluids, is completely relieved of symptoms after the third fever seance.

The next condition is chronic gonorrhea and its complications, gonorrheal arthritis, prostatitis, epididymitis, etc. We see these cases only after they have had vaccines and vitamines, milk shots, and typhoid injections and sulfanilamide. These people are of the group that we feel reasonably certain adequate fever completely cures.

The next category which is definitely benefited is inflammatory conditions of the eye. Iritis, corneal ulcer, certain types of conjunctivitis, and keratitis. These conditions are treated entirely upon the recommenda-

*Read before the Section on Psychiatry, Neurology, and Endocrinology, Annual Session, Oklahoma State Medical Association, May 20, 1941, in Oklahoma City.

tion of the referring eye specialist, who remains in immediate responsibility and contact with the patient throughout the course of treatment.

A typical case example of the dramatic effectiveness of controllable fever therapy in inflammatory eye conditions is a case currently under treatment at St. Anthony Hospital, which is quite fresh in my mind. This 36-year-old boy is under treatment for a second attack of iritis. He has been thoroughly studied from the standpoint of focal infection and none has been established. He has been competently treated for over three weeks by one of the better eye men. The classical treatment of atropin, sterile milk, foreign protein therapy, and typhoid shots have not improved the patient. He is seen at St. Anthony's with unremitting pain in the inflamed eye. The atropin, which has been taken every few hours in the eye for relief of pain, is discontinued and the first fever treatment started. When this man's temperature reached 103 degrees, the pain in his eye was relieved. Subsequent developments established that the pain never returned. It was never again necessary to give him atropin for relief. After two bouts of fever of 105 degrees, axillary, for over two hours and each ranging to a peak of 107.4 by rectum, it is considered that the course of the iritis was interrupted. A third additional treatment is given and the patient returned home within a week after his first treatment.

Here is striking proof that all the fever producing modalities that medicine has been using and abandoning over the last 20 years have a common denominator; this is fever production. Milk shots and so-called foreign protein therapy benefit the individual who reacts to them with sufficient fever. Typhoid shots benefit the individual who reacts to them with sufficient fever.

Conditions which classically have been treated successfully by milk shots and typhoid shots are now the better and more quickly treated by the more direct and immediate application of the essential therapeutic agency, namely, increased body temperature.

Another category of diseases that we are tentatively employing fever in is "virus encephalopathies," chorea-like encephalopathies and in conjunction with intravenous vitamine B-6 occasional test cases of frank Parkinson's disease. Theoretical justification may be rationalized for use of fever in all of these situations. Empirical and practical justification is apparent in some of these conditions, chiefly chorea. Benefit is here proven.

In our experience of ten cases of chorea for the past year and a-half, fever therapy and vitamin B-1 have relieved all cases but one. From our experience with these cases, we are realizing that chorea is a disorder with many aspects and not a clear cut and simply defined problem. One is impressed by the prominence of hysterical material encountered in these cases. Certainly a complete and competent insight into the etiology of chorea is lacking. Following is a chart of cases for the past year, treated by artificial fever therapy, indicating the type of case, the treatment, and the results.

FEVER THERAPY CASES
ST. ANTHONY HOSPITAL

DIAGNOSIS	CASES	RESULTS
Acute Iridocylitis	3	All definitely improved
Infectious Arthritis	2	Both definitely improved
Arthritis non-specific	2	Both unimproved
Sydenham's chorea	2	Both improved
Encephalitis	2	Both improved
Lung abscess	1	Unimproved
Mycosis Fungoides	1	Unimproved
Parkinson's Disease	1	Slight improvement
Neuro-Syphilis	1	Greatly improved—Serology reversed
Tabes Dorsalis	1	Treatment discontinued
Transverse Myelitis	1	Unimproved
Tabo-paresis	1	Improved
Undulant Fever	1	Improved

FEVER THERAPY CASES
COYNE CAMPBELL SANITARIUM

DIAGNOSIS	CASES	RESULTS
Encephalitis	6	5 improved
Sydenham's chorea	5	4 Improved
Paresis	6	3 Improved
Meningio Vascular Syphilis	1	Improved
Parkinson's Disease	1	Unimproved

In the control and arrestation of central nervous system syphilis it is not truly known whether high fever is spirochetocidal or not. Many workers think that they have proved that temperature of 105 is spirochetocidal. This point is of only academic importance, however, when it is so easily shown that the gross clinical aspects of a seriously disabling disease is favorably modified by six to a dozen bouts of hyperpyrexia. When the paretic can write his name again and the tabetic is free of his painful gastric crisis, the lay relatives do not ask you academic questions.

The serology of these cases is tricky and difficult to evaluate. Negative spinal fluids follow positive spinal fluids and in turn are followed by negative tests. Dependence may not be placed on a single or a few spinal fluid examinations. It is necessary for the physician to rest his judgment on a careful

study and conscientious appraisal of the patient and the general clinical manifestations. Occasionally we see a reversal of the serology after treatment has been stopped for six months.

Certainly the luetic patient is never encouraged to believe he will be cured but an effort is made to instruct him to realize that his condition must and may be controlled. Although we have only been at this a few years, it is our sincere belief that those cases in which the circumstances are fortuitous, (continuous observations by the physician of the course of the patient's disease), adequate repeated courses of fever therapy will arrest the onslaught of the disease indefinitely.

PHYSIOLOGICAL ASPECTS

The alterations in the metabolism and physiology of the patient under hyperpyrexia is an extremely interesting and instructive problem. These artificially induced departures from the normal status are numerous, delicate, and little understood. These subtle chemo-physical changes are of great importance.

The totality of knowledge of human physiology has barely been tapped. It follows that many changes occurring under fever escape our appreciation. Hence our judgment of the efficiency of this treatment is, in all honesty, empirical. An increasingly accurate knowledge of the physiological chemistry of human hyperpyrexia and its effect upon parasitic organisms and non-symbiotic viruses may better be comprehended if an ecologic perspective is maintained in relation to the total process. I have little patience with the glib and over-simplified explanations imposed upon the laity and even upon the profession by some highly articulate and yet unscientific writers. Much has been written on this subject, some very little of it is worth reading. (I commend to you an article by C. F. Finney, M.D., printed in the Annals of Internal Medicine in October, 1932.)

The best work done on the chemistry of hyperthermia has been done by Danielson, Stecher, Muntwyler and Myers of the Western Reserve university in 1938. In a summary way the conclusions are as follows:

"The acid-base balance of the blood serum has been studied in a series of patients who were subjected to artificial fever. Certain of the patients were permitted to drink a chilled 0.6 percent sodium chloride solution during the treatment while others were allowed to drink iced distilled water only.

"The results of the studies which were made at the end of the period necessary to raise the body temperature from normal to the fabrile level leave little doubt that hyperventilation plays the major role in causing the initial disturbances of the acid-base balance of the blood in artificial fever.

"In patients who were permitted to drink water only, the following blood changes were encountered at the end of either two or four hours of fever: an elevated pHs, a decreased pCO2 and decreases of the (NAHCO3)s, (NACl)2, inorganic phosphorus and the serum total base concentration. The total measured acid concentration was also decreased while the undetermined acid fraction was increased. The same changes were encountered when the patients were permitted to drink the dilute saline solution with the exception that the (NACl)s was maintained slightly above the pre-fever level.

"These observations as well as the more favorable clinical conditions of the patient following fever therapy when salt is contained in the drinking water are discussed briefly."

With the rise in temperature there occurs an increase in pulse rate. This increase is found to be generally proportional to the temperature elevation. This pulse rate increase is found to be specifically in relation to the skin temperature elevation. It is this factor that makes the introduction of heat internally superior to the introduction of heat externally. Hot baths and hot steam raise the body temperature only after elevating the skin temperature, disproportionately.

The velocity of the blood flow is accelerated and no problem results as long as the blood volume is maintained. The blood velocity is reduced, however, after the patient is permitted to sweat himself out and hemoconcentration supervenes. In cases that go bad under high fever and develop heat exhaustion, the blood will sometimes be so black and thick that it is difficult to aspirate it with a needle. This perversion of physiology represents the greatest threat under treatment. Proper insight prevents its occurrence and proper treatment is always one thing, namely, intravenous sodium chloride in quantities sufficient. By sufficient I mean adequate to excessive. In one 240 pound, 15-year-old boy with chorea, it was necessary to give him, through large gauge needles in both arms, 4,500 cc's of normal saline in the course of two hours. I cite this extreme case as a matter of emphasis.

The blood pressure is usually elevated in the systolic reading a few points and almost always reduced in the diastolic reading. I have observed the diastolic reading to be zero in any number of cases. In patients that flush under treatment and sweat freely, the systolic pressure will be reduced, particularly near the end of the treatment, but un-

less the pulse is fast, no anxiety over shock need be entertained. In hypertensive patients, the blood pressure is always reduced under treatment and in several cases this reduction has remained permanent to date.

In conclusion, it is reiterated that controllable, artificial, electrically induced hyperpyrexia has been, in our hands and under our observation, a definitely effective therapeutic agent. In a number of disorders it is the only effective therapy available. Chief of these is general paresis. Thus far we have been fortunate in escaping all mortality.

Inflammatory conditions of the eye lend themselves most satisfactorily to this therapy.

Late and complicated cases of gonorrhea are resistant to all other forms of therapy and are readily and certainly relieved by adequate fever therapy.

Laboratory Findings in Pneumonia and Bronchitis

Report on 100 cases.

WILLIAM H. BAILEY, M.D.*

OKLAHOMA CITY, OKLAHOMA

Pneumonia, and particularly lobar pneumonia, has always been a dramatic as well as a very fatal disease. What could be more striking than the sudden onset, the chill, the high temperature, the positive signs of consolidation in the lungs, all within a period of a few hours. What more thrilling experience than to have seen the rapid change in the clinical picture of a case of pneumonia just after the crisis had occurred. Although, perhaps at the present time, much of the glamour has been taken out of this disease because of the introduction of sulfapyridine and similar drugs and the use of specific type anti-serum, this very fact has stimulated a new interest in it. It still is thrilling to see the temperature in these cases drop to nearly normal in 18 to 24 hours after sulfapyridine has been started.

In only a very few diseases will the laboratory findings remain practically the same throughout the whole course of the illness. The usual routine is that at different stages in the disease the laboratory findings will be quite different. One cannot say, dogmatically, that typhoid fever gives a positive Widal, because for the first week of the disease it is most unusual for the Widal to be positive, while the blood culture which is most often positive in the first stages of typhoid is usually negative in the latter part of the disease or soon after the Widal becomes positive.

So, also, laboratory findings are affected and changed by the treatment administered. This is brought about in two ways, first by the effect the drug has on changing the pathology and symptoms of the disease and second by the direct effect it has on the tissue or system closely associated with the test being performed. The blood culture in a case of streptococcic septecemia which has been positive is often rendered negative within a few hours after sulfanilamide has been administered.

A third factor that has its effect on the laboratory findings is that we may expect a change from the routine findings for that particular stage of the disease when some complication as a re-infection, a superimposed condition or an extension of the original pathology occurs.

All these various changes in the physical signs and symptoms of a disease are what we expect to find at different stages so why not look for changes also in the laboratory findings, for they are simply additional signs and symptoms elicited by certain specialized methods of examination.

Because of the present interest in pneumonia and because of the help given by the Pneumonia Control Program of the State Board of Health, started about a year ago, we have been able to obtain more complete laboratory data than is usually requested in the average private case. We wish to acknowledge our appreciation to the Commissioner of Health, Dr. Grady Mathews, and his assistants for this help.

All of these cases, except a very few, were admitted as patients at Wesley Hospital during the calendar year of 1940. We wish to thank the attending physicians for their cooperation in this study and for the privilege of reviewing the records of their cases.

*Doctor Bailey is now a Colonel in the army stationed at the Station Hospital, Fort Sill, Oklahoma.

In most of the cases in the series the request for the sputum typing, the initial blood and urine examinations and the blood culture was received early in the disease before any chemotherapy had been started. During the first half of the year the sputum in those cases which could not be typed direct were sent direct to Mrs. Lucile Wallace of the Bacteriology department at the University of Oklahoma Medical school, who did the mouse inoculations and typing. We wish to thank Mrs. Wallace and Dr. H. D. Moor, head of the department for this valuable assistance. During the last half of the series most of the mouse inoculations have been done in the laboratory at Wesley hospital.

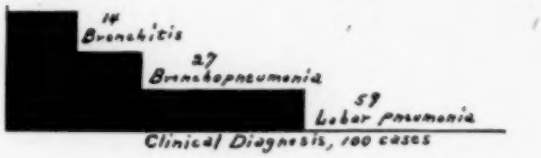
In a few cases, as in infants and young children, and in very old patients, a satisfactory sputum specimen could not be obtained. In these cases a specimen for culture was obtained either on a swab passed over the pharynx or a small catheter passed through the nose to the back of the throat and a small amount of mucus collected by suction with a syringe. This was incubated in a liquid culture media for eight to 12 hours and inoculated into a mouse.

1. The slide method used for the typing of the pneumococcus was the Neufeld Method which makes use of the reaction of the swelling of the capsule of the organism when brought into contact with its specific antiserum.

2. The clinical diagnoses of the 100 cases were, 59 cases of lobar pneumonia, 27 cases of bronchopneumonia and 14 cases of bronchitis.

3. Requests were received for typing 98 of these cases. Of the two cases in which no request was received, one was in an elderly woman, who had fractured her hip some three weeks before. She developed symptoms of a bronchopneumonia one day and died the next. The other case was in a man 68 years old, who had a very severe lobar pneumonia from which he died on the eighth or ninth day. We felt that in this case the attending man did not request sputum typing because of economic reasons. This in a way was unnecessary because at that time the service of the State Pneumonia Control program was available in Oklahoma county, as it is at the present time, and all of these laboratory tests could have been obtained free of charge to the patient. This service is intended for those patients in the low income group the same as it is for the indigent.

Of these 98 cases in which typing was requested we reported type pneumococci in 71 cases, streptococci in three cases, staphylococci in one and a small Gram-negative bacillus similar to the influenza bacillus in one case. In the remainder we were unable



to determine any particular organism that we thought predominated. Although not scientifically conclusive, yet for ordinary clinical purposes in cases of this nature it is customary to accept the predominating organism as the infective agent in the etiology of such a condition.

Of the 71 cases showing type pneumococci the clinical diagnoses were 52 cases of lobar pneumonia, 18 cases of bronchopneumonia and one case of bronchitis.

Of the 27 cases not typing, five were lobar pneumonia, nine bronchopneumonia and 13 bronchitis.

4. In the initial red cell counts 87 cases gave a count of over four million. Of these, 16 were over five million and 71 between four and five million. Only 13 were below four million.

5. The initial hemoglobin tests gave 90 with over 70 percent, 46 over 90 percent, with several over 100 percent and 44 between 70 and 90 percent while only ten were below 70 percent.

6. Hemoglobin estimations were taken at 48 hour and 96 hour periods for the purpose of indicating the toxic effect of sulfapyridine. In 48 hours 14 had a higher hemoglobin while 24 showed a lower percent.

In 96 hours 63 showed a higher percent while 15 gave a lower reading.

7. The initial white cell count gave 15 above 25,000, 53 between 10,000 and 25,000 and 32 below 10,000.

8. In the initial counts the polymophonuclears gave 94 with polys over 70 percent, of these 33 were over 90 percent and 61 between 90 and 70 percent. Only six were below 70 percent.

9. White counts were taken at 48 hour and 96 hour periods to show the toxic effect of the drug. In 48 hours seven showed a higher white count, 33 about the same and 60 gave a lower count. In 96 hours 11 were higher, 26 the same and 63 lower.

10. The urine was tested at these same intervals. During the whole course of the disease only 18 showed albumin, 11 had a few red cells and in three we found sulfapyridine crystals.

11. Although sulfapyridine crystals are fairly typical they are rather difficult to recognize unless they are present in large numbers.

The blood cultures were positive in only two cases.

12. The specific types of pneumococci in the different pneumococcic cases found and the number of cases of each type were as follows:

Type I—4	Type XVIII—5
Type II—4	Type XIX—4
Type III—7	Type XX—0
Type IV—4	Type XXI—0
Type V—6	Type XXII—1
Type VI—7	Type XXIII—2
Type VII—4	Type XXIV—0
Type VIII—4	Type XXV—1
Type IX—1	Type XXVI—0
Type X—1	Type XXVII—0
Type XI—2	Type XXVIII—0
Type XII—3	Type XXIX—3
Type XIII—1	Type XXX—0
Type XIV—2	Type XXXI—0
Type XV—2	Type XXXII—0
Type XVI—1	Type XXXIII—1
Type XVII—0	

There were nine deaths in the whole series. One was a type II, one a type V, one a type VII, two were type XXIX, two streptococcic, and two were the two cases in which no requests for typing were received. The age incident of the deaths in this series showed all but one were over 40 years of age. The patient under 40 years who died was 30 years old and he was one of the streptococcic cases.

Considering only the proven pneumococcic cases the mortality was five in 71 cases or 7.2 percent. Cecil gives 8-12 percent in his series of over 1,000 cases before the introduction of the new chemotherapy.

Summary: In so far as this small series is concerned and from the experience we have gained we feel that we may draw the following conclusions. It will of course be realized that only 100 cases is much too small a number from which to obtain very definite information.

1. We consider the Neufeld method of typing pneumococci as a rapid, efficient and very satisfactory method for clinical use.
2. The borderline cases in which it is difficult for the physician to diagnose pneumonia clinically are also the ones in which it is difficult to type the sputum.
3. The most characteristic blood finding is a high polymophonuclear leukocytosis.
4. Fatal cases may have either a high or only a moderate leukocytosis.
5. Only about two percent of the cases will have a positive blood culture in the initial stage.
6. Unless satisfactory sputum specimens can be secured before chemotherapy is started the typing is very unsatisfactory.
7. Pneumococci will occasionally appear in the sputum as chains and all such specimens should be tested for typing.
8. At times the sputum, even from frank pneumonia cases, will show too few pneumococci to type direct and all such specimens should be inoculated into a mouse and typed.
9. The mortality in pneumococci pneumonia in this series was around 7.2 percent, with the most deaths occurring in patients past 50 years of age.
10. Streptococcic pneumonia is much more fatal than pneumococci pneumonia.

Obstetrical Shock

BRUNEL D. FARIS, M.D.
OKLAHOMA CITY, OKLAHOMA

Shock after delivery, unless associated with hemorrhage, rupture of the uterus, or inversion, is rare, but I have seen two cases followed by simply attempting the Crede too forcefully. Such a nervous shock sometimes follows the removal of gauze packing or any minor obstetrical procedure where an anesthetic has not been used.

Obstetrical shock is a very rare complication of pregnancy, but when seen necessitates rapid and accurate treatment if the patient's life is to be saved.

It is interesting to note that one of the first manifestations of this condition is a change in the character and the rate of the pulse, followed quickly by a death-like palor, and cold, clammy skin.

De Lee states that Obstetrical shock or

nervous shock of labor may terminate fatally and many cases are cited in the literature of sudden shock in labor followed by death. There is no apparent explanation for a profound collapse of the patient and the most careful examination both at the bedside and at the autospy may not reveal the slightest abnormality. Some call this an acapnia and others peritoneal shock.

Pituitrin sometimes cause pain simulating that of a coronary occlusion, followed by symptoms of shock. Some say that Obstetrical shock is due to traumatism to the pancreas during prolonged bearing down effects —same causing insulin shock or hyperinsulinemia. The shock may resemble a form of anaphylaxis. Still others say that the vagosympathetic system is effected due to the rapid emptying of the uterus. Audeburt in 1921 collected 12 cases—of shock in labor. (Labor was spontaneous in three of them). Three he stated were due to the paraylsis of the stomach, and three to the action of chloroform, and the other causes not determined. Williams suggested that arterio duodenal occlusion following acute elimination of the bulk of the abdominal contents incident to a sudden decrease in the size of the uterus might be the cause. Several cases were thought to be due to acute dilation of the stomach. There was dark fluid vomitus and death soon followed.

Crushing of the pelvic floor may cause surgical shock, similar to that following crushing of the leg. We must remember that traumatism to the abdomen may cause shock. Glotz states that striking a frog's abdomen will stop his heart. Other conditions seen complicating pregnancy which may cause shock, are heart disease, rupture of the intestines, gallbladder, pulmonary embolism and so forth.

The treatment depends on a hurried diagnosis—the foot of the bed should be elevated, one-half amp of adrenalin and one-fourth gr. morphine given, warmth to the feet, and glucose—especially for edema of the lungs or possibly embolism. (30 to 100 cc of 50 percent glucose). If we are able to rule out a pulmonary or cardiac embolism, 500 cc of ten percent glucose intravenously is used instead of the 50 percent. One thousand cc of Normal Saline is usually given at once, subcutaneously, into the thigh. Oxygen should be given. Digitalis intramuscularly is a questionable treatment that may be given, if there is reason to suspect the heart. The efficacy of coramine is questionable. The ideal treatment would be blood plasma if it could be easily obtained. Williams claims the stomach should be emptied and the patient should be treated according to the exigencies. Too often we do not recognize the so-called exigencies. Many use 10 cc of five percent calcium chloride intravenously for vascular collapse.

Anuria Following the Administration of Sulfadiazine and Sulfapyridine: Case Reports*

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FRANK T. JOYCE, M.D.
OSCAR S. PYLE, M.D.
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We wish to present two cases of unusual reactions to the sulfonamide compounds:

CASE REPORTS

Case 1, J. W., a 13-year-old white boy weighing 85 pounds was admitted to the hospital on September 27, 1941 for treatment of a six inch laceration of the left leg. The injury was caused by being run over by a wagon. The wound was cleaned and sutured and the boy was given 1,500 units of tetanus antitoxin: 48 hours later his temperature rose to 100.6 F. and a bubbling seropurulent discharge was oozing from the wound. There was a marked lymphangitis of the left leg and thigh and a left inguinal lymphadenitis. No crepitation was felt in the tissues but gas gangrene was suspected. The wound was opened, hot packs started, and 2,000 units of combined tetanus-gas gangrene antitoxin was given for prophylaxis.

Sulfadiazine was started; the initial dose was 2.5 grams followed in fours hours by 1.5 grams and then 1.0 gram every four hours. This dosage was continued for the following 84 hours when a total of 24 grams of sulfadiazine had been given. The patient tolerated the drug well for 66 hours when 19 grams had been given. At that time he complained of aching pain in both kidney areas and cramping abdominal pains. Unfortunately, the drug was continued for five more 1.0 gram doses and during the time of those 20 hours the pain became worse and severe nausea and vomiting developed. The

*Read before the Oklahoma State Internists society, Chickasha, Oklahoma, December 4, 1941.

last voided urine specimen, which amounted to 60 cc. of grossly bloody urine, was obtained only seven hours after the patient first complained of pain in the kidney areas.

After anuria had persisted for 42 hours (Oct. 5, 1941), cystoscopy was done but ureteral catheters could not be passed higher than one-half inch because of obstruction in both ureters. The boy was returned from surgery and was given an intravenous injection of 1,000 cc. of ten percent glucose in saline. Immediately following this preparation a nephrostomy was done on the left kidney. After delivery of the kidney from the incision it was found to be swollen to about three times its normal size. Much to our surprise the renal pelvis was not greatly dilated but was tense and about 15 cc. of bloody urine was aspirated. Innumerable fan-shaped crystals were seen on microscopic examination of this urine. Fluids were given by the intravenous route and the pyelostomy drained well.

On October 9, 1941, about 36 hours following the pyelostomy on the left kidney, cystoscopy was performed again and a catheter was passed into the pelvis of the right kidney. After irrigating the pelvis urine began to flow from the catheter. The catheter was left in for two days. Within 24 hours after its removal there was a recurrence of pain in right kidney area and a decreasing urinary output so that on October 11, 1941, the catheter was replaced in the right kidney pelvis. The catheter was left in again for two days with a recession of the pain.

The patient's course was satisfactory for almost two weeks when on October 26, 1941, pain in the region of the right kidney recurred and was accompanied by a fever of 104 F. The pain and fever persisted and on October 29, 1941, the right ureter was again catheterized and urine containing four plus pus was obtained. The catheter was left in for two days and was removed because there had not been any relief of the symptoms. A perinephric abscess was suspected and proven by needling the right flank and on November 3, 1941, the abscess was drained. Fever and pain promptly subsided.

Urine has continued to drain profusely from the left pyelostomy except for a few days after October 31, 1941, when drainage through the left ureter was re-established after a successful ureteral catheterization on that date. Prior to that date it had been impossible to pass a ureteral catheter up to the left renal pelvis although this procedure had been attempted every time the patient was cystoscoped for ureteral catheterization on the right side.

For 17 days following the drainage of the perinephric abscess on the right his course was quite satisfactory. On November 20, 1941, there occurred a profuse hemorrhage from the draining sinus which subsided spontaneously. At the same time he began to pass blood and blood clots from the bladder in large quantities. The hemorrhage from the sinus occurred several times daily and it became necessary to give him 2,500 cc of blood in a period of two days. In spite of the transfusions the hemorrhages persisted and a nephrectomy on the right was done in order to control the bleeding. Because of the previous abscess it was very difficult to free the kidney and the source of the preoperative bleeding was never determined. Since then there has been no bleeding and he has not had any fever since December 5, 1941.

It has been assumed that some urine was draining from the left ureter following the catheterization of that ureter on October 31, 1941, however, since the right kidney was removed there has been no voided urine. Further attempts to catheterize the left ureter has been postponed in view of his previous trouble.

Microscopical sections of the right kidney: Section through the kidney shows diffuse suppurative infiltration of all portions of the kidney. The cortex shows many tubules filled with masses of pus. There is also a mass of infected thrombus along one edge. No sulfadiazine crystals are found in the tubules. There is rather an extensive tubular degeneration and interstitial edema. Diagnosis: Acute diffuse suppurate nephritis.

Case 2, C. W., a 48-year-old male weighing 202 pounds entered the hospital on January 6, 1941, complaining of pain in both sides of the chest, coughing, and fever. He stated that he had had "flu" for five days prior to his entrance into the hospital. Examination showed a temperature 102 F., respirations 32 per minute, and pulse 120. Except for the chest the remainder of the physical examination was normal. The lungs contained numerous rales, vocal fremitus was increased but there were no definite areas of dullness. Breath sounds were bronchovesicular in type throughout. The sputum was bloody and contained numerous pneumococci and micrococcus catarrhalis. The white blood count was 15,700. A diagnosis of bronchopneumonia was made and sulfapyridine was started. The initial dose was two grams followed in two hours with two grams and then one gram every four hours. Ten grains of sodium bicarbonate was given with each dose of sulfapyridine. About 36 hours after the drug was started and he had taken only a total of 12 grams he complained of severe cramping pain in the abdomen. He had not complained of nausea until the occurrence of the abdominal pain, but from that time on

vomiting became severe. He was given two more doses of one gram each of sulfapyridine. Four hours after the appearance of the abdominal pain he complained of being unable to void. He was catheterized and one ounce of bloody urine was obtained.

Within an hour 1,000 cc. ten percent dextrose in normal saline was started intravenously but did not produce any urine in the bladder. Six hours after the anuria was discovered he was cystoscoped and crystals were seen to bulge from each ureteral orifice. With considerable difficulty ureteral catheters were pushed up into each kidney pelvis and irrigations with normal saline were carried out. The ureteral catheters were left in place and urine drained from each rather promptly. The catheters were removed 24 hours later, however, the urine was grossly bloody for another 24 hours. The patient's fever subsided and he made an uneventful recovery from both the pulmonary infection and the ureteral obstruction.

DISCUSSION

Sulfadiazine was used in the case reported above in accordance with a report by Long[1] of satisfactory results in the treatment of Cl. Welchii and Vibrion septique infections in vitro; gas gangrene was suspected in this case. Most of the literature[1-2-3-4-6-7] on this subject has stressed the low toxicity and the therapeutic advantages of sulfadiazine. In over 1,000 cases reported in the literature there have been only two previously reported cases of anuria[2-3] from the clinical use of this drug.

Sadusk and Tredway[4] in a rather thorough article on the absorption, excretion, diffusion and acetylation of sulfadiazine in man go so far as to predict that because of the great solubility of the acetylated derivative of sulfadiazine in urine that this drug would probably not produce calculi in the urinary tract of man. Contrary to this however, Lehr and Antopol[5] in a study of the toxicity of sulfadiazine in rats found that all animals that developed anuria did so because of a nephrotic type of kidney damage due to precipitation of the free drug in the renal tubules. In their study it was shown that symptoms of toxemia and death did not occur during the time of maximum concentration of the drug in the blood stream; i.e., there was no relation between blood level and precipitation of the free drug in the renal tubules. In the case of anuria from sulfadiazine reported by Thompson, Herrell and Brown[3] the blood levels were only 11.4 mgm. per 100 cc of blood at the onset of anuria. We have recently observed a patient with blood stream concentrations of sulfadiazine as high as 29 mgm. percent with no hematuria.

Lehr and Antopol as well as Thompson and associates have stressed the lessened gastrointestinal and other subjective manifestations of toxicity with the use of sulfadiazine prior to the onset of anuria and azotemia. Long[6] as well as Thompson et al have emphasized the fact that alkalinazation is of no advantage in the prevention of these kidney complications.

Anuria following sulfapyridine adminstration was first reported by Southworth and Cook[8], and later many reports appeared in the literature. We feel that our case here reported is worthy of note primarily because of the small amount of drug administered and the rapidity of the onset of anuria.

We believe that blood counts and the determination of blood levels of the particular drug given are important adjuncts to proper therapy in the administration of the pyridine, thiazole and the diazine derivatives of sulfanilamide; however, high blood levels or the total amount of the drug given give no indication of the onset or impending danger of the most dramatic and dangerous complication in the administration of these valuable drugs, i.e., anuria. It is our opinion that the only means of avoiding this occurrence is by close attention to the urinary output, i.e., keeping the 24 hour output in the neighborhood of 1,000 to 1,500 cc or above for adults and proportionally smaller amount for children, and watching closely for the occurrence of microscopic hematuria, discontinuing the drug at its first appearance, and forcing fluids.

CONCLUSIONS

In order to avoid the occurrence of anuria and its subsequent dangers in patients who are taking sulfonamide drugs it is imperative that each patient maintain a urinary output of at least 1,000 cc. daily for adults, and a correspondingly smaller amount for children. Anuria may occur if this is not observed, regardless of the amount of drug absorbed, the blood level of the drug, or whether the urine is alkaline.

BIBLIOGRAPHY

1. Long, P. H.: Sulfadiazine: The 2-Sulfanilamido-pyrimidine Analogue of Sulfanilamide, J.A.M.A., 116:2399 (May 24) 1941.
2. Finland, M., Strauss, E., Peterson, O. L.: Sulfadiazine: Therapeutic Evaluation and Toxic Effects on Four Hundred and Forty-Six Patients, J.A.M.A., 116:2641 (June 14) 1941.
3. Thompson, G. J., Herrell, W. E., Brown, A. E.: Anuria after Sulfadiazine Therapy, Pro. Staff Meetings Mayo Clinic, 16:609 (Sept. 24) 1941.
4. Sadusk, J. F., Jr., Treadway, J. B.: Observations on the Absorption, Excretion, Diffusion, and Acetylation of Sulfadiazine in Man, Yale Jour. of Biology and Medicine 13:539 (March) 1941.
5. Lehr, David, and Autopol, W.: Toxicity of Sulfadiazine and Acetylsulfadiazine in Albino Rats with Special Reference to Renal Lesions and Their Significance, Urologic and Cutaneous Rev., 45:545 (Sept.) 1941.
6. Long, P. H.: Clinical Use of Sulfonamide Compounds in Prophylaxis and Treatment of Infections, Northwest Med. 40:311 (Sept.) 1941.
7. Flippin, H. F., Rose, S. B., Swartz, L., and Domm, A. H.: Sulfadiazine and Sulfathiazole in the Treatment of Pneumococcic Pneumonia, Am. Jour. of Med. Sc., 201:585 (April) 1941.
8. Southworth, H., Cooke, C.: Hematuria, Abdominal pain and Nitrogen Retention, J.A.M.A. 112:1820 (May) 1939.

An Unusual Case History for Diagnosis*

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Infant was a full term normal birth. Weighed 8½ lbs., delivered at St. Johns hospital and discharged on the tenth day.

Patient was re-admitted on twenty-first day, after having spent 11 days at home, with a history of coughing and choking spells which became progressively worse and became so severe that infant would not breathe for three to four minutes and would become extremely cyanotic.

Physical examinaton revealed a very sick infant—cyanotic, irregular respiration, temperature 100.8°, pulse 130, respiration 48.

Head—Nostrils filled with a yellow-gray mucous discharge.
Pharynx injected.
Ears—Drum membrane normal in appearance with light reflex present.
Neck—No pathology.
Chest—Lungs show evidence of an early pneumonia over the right side with coarse rales and increased breath sounds.
Cardio vascular—No pathology.
Abdomen—Soft, no masses or distention.
Genito urinary—Negative.
Skin—Very cyanotic during choking spells.
Extremities—Negative.

On February 18, 1941, the day of admittance, a direct smear of the throat revealed a few bacilli strongly suspicious of Diphtheria and culture revealed many diphtheroids and an occasional diphtheria bacillus. 20,000 units of Diphtheria Antitoxin was given intramuscularly.

Blood Count—Hemoglobin 85%; R.B.C. 4,240,000; W.B.C. 14,800; Neutrophiles 64; Myelocytes 0; Juveniles 0; Band 30; Segmented 34; Mononuclears 5; Kline and Kahn negative.

Urine—Acid; albumin negative; sugar one plus, ten pus cells per L.P.F. X-ray of the chest revealed a large thymic shadow with markedly involved peribronchial infiltration in all portions of lungs except a small portion of the right base.

Rx—X-ray treatment of thymus.
Sulfathiazole Gr. II every four hours.
Oxygen—Nasal catheter.
Steam inhalations.
Coramine ½ ampoule.
Suction of mucous from nose and throat.

February 20, 1941—Patient still having choking spells with severe cyanosis. Unable to take fluids by mouth because of choking so 125 cc of Hartmans solution given by Hyperdermoclysis and repeated six hours later. Cevitamic acid, 25 mgm. given.

February 21, 1941—X-ray reveals a marked decrease in the size of thymus and lung fields show marked bronchitis with sufficient evidence to make it very suggestive of Bronchial pneumonia. Sulfapyradine Gr. II given every four hours. Alpa Lobelin given intramuscularly. Hartmans solution, 150 cc given and repeated in six hours by 125 cc. Spasmodic movements of eyes and lips with edema of eyes and face and extreme difficulty in swallowing. Adrenalin in oil, ¾ M given with no response. Necessary to give artificial respiration on repeated occasions—as long as 25 minutes.

Blood Count—Hemoglobin 80 percent; R.B.C. 4,000,000; W.B.C. 39,450; Neutrophiles 48; Band 14; Segmented 34; Lymphocytes 52.

February 23, 1941—Calcium gluconate Gr-V intramuscularly.
Magnesium sulphate 25 percent, 2 cc, given intramuscularly and repeated in six hours.
Gr. III Sulfapyradine in 40 cc distilled water given subcutaneous.
Hartmans 125 cc given subcutaneous.
Convulsions seemed to be controlled.

February 25, 1941—40 cc citrated whole blood IV.
Sulfathiazole Gr. II every four hours.
Hartmans solution with gavage.
Vitamin K M X.

February 27, 1941—Patient appears improved but lungs do not clear up. X-ray report shows numerous small patchy areas of density of the entire lung fields, having the characteristics of a broncho pneumonia.

Sulfathiazole Gr. III given in formula. Calciden Gr. ½, given by gavage. Continuous oxygen.

March 1, 1941—Breathing improved—Fewer attacks of coughing and choking. W.B.C. 31,650; Neuthrophiles 59; Juve-

*Read before the Section on Pediatrics, Annual Session, Oklahoma State Medical Association, May 20, 1941.

niles 5, Band 27; Segmented 13; Lymphocytes 35; Eosinophiles 6.

March 2, 1941—Hemoglobin 60 percent; W.B.C. 51,450; Neutrophiles 41; Myelocytes 5; Juveniles 13; Band 10; Segmented 13; Lymphocytes 54; Mononuclears 2; Basophiles 3.

Continuous oxygen.

Vitamin K M V.

Vitamin C 25 mgm.

Sulfathiazole discontinued.

March 6, 1941—Formula by gavage. Temperature higher. Negative urine.

Sulfapyradine Gr. III every four hours subcutaneous.

March 9, 1941—Patient had repeated convulsions and appears to be in peripheral vascular collapse. Adrenaline 1—1,000 ¼ ampoule. No improvement.

Calcium gluconate Gr. V intramuscularly.

Sodium luminal Gr. ¼ hypodermically.

March 11, 1941—Twitching of mouth, right hand and foot. Spinal puncture and 25 cc removed. Clear—slight trace of Globulin. No W.B.C.

125 cc whole citrated blood intravenously.

X-ray shows a marked increase in density in the upper left lobe. Marked increase of cardiac shadow which is very suggestive of pericarditis with effusion.

March 15, 1941—Cough Plate—no pertussis bacilli. Many staph. Few gram negative bacilli.

X-ray shows a marked decrease in size of cardiac shadow both to left and right.

March 20, 1941—Cough Plate—Negative for pertussis bacilli.

Sulfathiazole Gr. I every four hours.
Oleum percomorphum M V
Vitamin K, M VIII
Cevitamic acid 50 mgm. daily.

March 24, 1941—Culture shows gram negative club shaped bacilli, cultural characteristics presumably pertussis bacilli.

March 26, 1941—Patient expired.

March 27, 1941—Pathological report: The body is that of a somewhat emaciated white male infant about two and one-half months old showing on external examination no anomalies, scars, nor lesions.

The body is opened by the usual midline incision from the sternal notch to the symphysis pubis. The chest shows a consolidation of all the lobes in both lungs with one small nodule on the left lung suggesting a tubercle. The trachea and bronchi show mucus secretion. There seems to be some infarction at the midaxillary portion of the left lower lobe. Several portions of both lungs are cut and dipped into water, most of them will not float; there is a fibrous induration in several portions. The thymus is small and the pleurae are smooth. The heart shows marked dilatation of the right side and there is a small grayish area of degeneration on the anterior surface of the right ventricle. The liver is smooth, edges somewhat rounded. On cutting the inferior vena cava and vessels from the liver a definite swelling of the liver was quite perceptible indicating a rather marked passive congestion on the right side of the heart. The spleen is fairly small. The pancreas, adrenals, stomach and small intestines show no pathology (they are examined insitu without excessive dissection).

Summary of Gross Anatomic Findings:

1. Bilateral unresolved pneumonia.
2. Pulmonitis.
3. Toxic myocarditis.
4. Cardiac failure, right side.

Microscopic Examination

Lungs: Unresolved bronchopneumonia.
Heart: Toxis myocarditis.
Liver: Moderate passive congestion.

DISCUSSION

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The presence of an occasional diphtheria bacilli in a culture from a patient who does not show a visible membrane in the nose or throat probably does not justify the diagnosis of diphtheria. However, I think you are always justified in giving diphtheria antitoxin when in doubt or have such a laboratory report. If diphtheria were present, it could have contributed to the lung pathology by producing weakness of the muscles of the soft palate which are usually the first to be involved, and may be affected as early as the fifth or sixth day. I doubt if an enlarged thymus produced any of the symptoms in this patient. I wonder if whooping cough was prevalent in Tulsa at this time, and whether this patient had come in contact with a case. I think two of the blood counts were rather typical of whooping cough, and late in the course, a culture showed an organism which had cultural characteristics of the pertussis bacillus. The choking spells, periods of asphyxia and the convulsions could be explained by a severe bronchitis and broncho-pneumonia complicating pertussis in a young infant. The failure of the pneumonia to respond to chemo-therapy was probably due to the organism being the pertussis or influenza bacilli instead of the penumococcus. The enlarged cardiac shadow may have been due to a terminal acute dilitation of the heart.

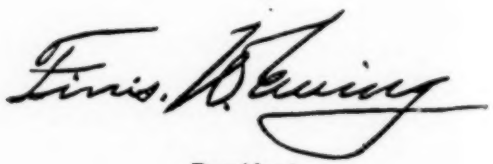
• THE PRESIDENT'S PAGE •

The Annual Meeting, April 22nd to 24th, which will commemorate the Fiftieth Anniversary of Organized Medicine in Oklahoma, should be the best attended meeting ever held in the State. A glance at the program carried in the March issue of the Journal shows a change in the general plan and guarantees everyone the opportunity to participate in the entire program.

It is my desire to use this page in this, my last opportunity to sincerely and earnestly thank the membership of the Oklahoma State Medical Association for their loyal support and cooperation throughout the year. I want to thank the office force in the Oklahoma City office for their loyal and enthusiastic aid; the members of the various committees who have given much of their time and have made many personal sacrifices for the good of medicine, and last I want to say to the Council, that their wholesome and kindly advice and wholehearted cooperation has made what otherwise might have been an onerous task the most pleasant year of my life.

It is now my desire to surrender the duties as President and commend to you, your new President and to assure him that he will have the privilege of leading the finest and most loyal group ever given any man.

Whatever success has been accomplished during the year just passed is due to the intelligent, loyal and untiring efforts of the office force, the Standing and Special Committees and the Council. Whatever errors or mistakes made must be laid at the door of your President, to each and everyone I plead that they were mistakes of the head and not of the heart.



President.

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**J.A.M.A., 93:1110—October 12, 1929*
Brückner, H—Die Biochemie des Tabaks, 1936

***The Military Surgeon, Vol. 89, No. 1, p. 7, July, 1941*

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EDITORIALS

FIFTY YEARS, AN EON IN MEDICAL PROGRESS

The story of the practice of medicine in Oklahoma would make one of the most interesting chapters in the history of medicine. Nowhere in the United States has there been such revolutionary progress as in this section of the short grass country.

There are doctors now living in Oklahoma who came in the early days when the practice of physic blended with the poetry of unplowed prairies and clashed with the primtive methods of the plains Indians which approached those of the Pre-Hippocratic period. The Indians lived under the fear of the supernatural and the mysterious manifestations of nature, and the Medicine Man often combined his priestly functions with the power of magic and the crude application of medicinal remedies. Oklahoma doctors who came in contact with the Indians had to contend with many of the superstitions and evil practices which confronted the father of medicine in the 5th Century, B.C. Not infrequently they found traces of primitive medicine among the white homesteaders.

Many of the white people who moved into this environment were very poor. Some of them holed in with the prairie dogs, rattle snakes, and burrowing owls, others lived above ground but in sod houses, and those who could afford a modest investment freighted in sufficient rough lumber to build small box houses. The country doctor, with horse and buggy, made the rounds day and night, tending the sick in these strange domiciles and following the stork from one homestead to another. There were no nurses, no hospitals, no clinics, no public health agencies, but the pioneer woman, calm, capable and courageous, mothered her family, shepherded her farm, nursed her neighbors and served as the doctor's aid. In those days on the plains the word neighbor meant more than Noah Webster, the pioneer in good American words, ever imagined.

Towns and cities sprang into being with facilities for growth and development which, in half a century, enabled them to stand abreast of those boasting three hundred years of traditional development. Such phenomenal progress has not been experienced in any other section of the country.

Because this was a land of opportunity, many well-educated, ambitious young doctors came here to seek their fortunes and, in spite of the fact that we had a few undesirable, early-day registrants, we started with a relatively high average of well qualified, progressive young men in the profession. Though the outside world knew and cared little about medicine in Oklahoma, the members of the local profession not only were giving the best individual medical care any pioneering people ever received, but they were keenly aware of, and actively engaged in, the most phenomenal period of medical progress the world has ever known.

Thus, they were laying the foundation for our present high position in the field of medicine. Through the development of the University of Oklahoma School of Medicine, the gradual evolution of hospital facilities, the postgraduate courses for country doctors, the development of public health services, the doctors of Oklahoma have forged an ever lengthening chain of professional achievements.

While we pause to give credit for fifty years of work well done, we should gather strength for the tasks before us. The young doctor, now standing upon the foundation which has been established through the untiring efforts of pioneering souls, should be inspired by the security which has come to him through the doctors of the "old school." Having been freed from the hardships and the time-consuming tasks of the old, he should pursue the new with a consuming desire to forge additional links in the chain which will ultimately place the medicine of the plains on a level with that in all the high places of the world.

Only through the young doctor of today can the pioneer doctor of yesterday receive his just reward. As he throws the torch to us let us say of him what the poet William E. Henley said of Lord Lister:

"We hold him for another Herakles,
Battling with custom, prejudice, disease,
As once the son of Zeus with Death and Hell."—L. J. M.

ORGANIZED MEDICINE AND PUBLIC WEAL

In this issue of the Journal Dr. Basil A. Hayes has given a concise history of the development of organized medicine in Oklahoma. Since the approaching annual meeting in Tulsa represents the 50th anniversary of the Oklahoma State Medical Association,

Dr. Hayes' historical sketch serves as a fitting contribution at this time and constitutes a valuable record.

But we must not let this half century mark pass without calling attention to the high purposes of organized medicine in Oklahoma. A careful perusal of the editorials, presidental addresses, published resolutions and committee reports in the Journal for the duration reveals one continuous unwavering theme, namely community welfare as expressed through education, sanitation and public health.

The persistent, unfaltering drive in this direction, often in the face of public indifference and political interference, is amazing. This shining record of unselfish striving for the sake of humanity serves as a well merited tribute to the worthy progenitors of our present enviable position in this field of endeavor.

We should find a way to let the people know that their safety and happiness depend largely upon the progress of medical science and its unselfish application to their daily needs. If they knew what organized medicine has done for them they would take the profession under their wings and exclaim with Socrates, "We owe a cock to Aesculapius."

The present response of our younger men to the call of our country indicates that the spirit of service abides with us.—L. J. M.

EIGHTEEN AND EIGHTY-NINE

In 1889 medicine was crossing the border, staking new claims and preparing to turn virgin soil.

The discovery of the causative agents of infectious diseases was bringing about a revolution in medical thought. Medicine was approaching the end of one of the most wonderful decades in the world's history. In this country we were entering upon a period of phenomenal scientific development.

In May, 1889, Johns Hopkins Hospital was opened. William H. Welch, William Osler, Halsted and Kelly were beginning their exceptional careers, each a pioneer in his own field. Every well-informed doctor knows much about the influence of these men upon medical education, and the development of medical science and public health. Osler was contemplating the preparation of his textbook, "*The Principles and Practice of Medicine.*" It is said that this book, falling into the hands of one of Rockefeller's advisors led to his interest in medicine and ultimately the development of the Rockefeller Institute for Medical Research.

In 1889 Walter Reed was sent to Johns Hopkins by the Surgeon General of the United States, who instructed him to attend the clinics of Osler, Halsted and Kelley, and to stay away from the laboratory. Reed could not resist the influence of Welch. Soon Carroll came and together under Welch they laid the foundation for the ultimate control of yellow fever, an accomplishment which ranks with Jenner's discovery of vaccination against smallpox. Simon Flexner was working with Welch at this time in preparation for his work with the Rockefeller Institute. Councilman Barker and others who have occupied high places in medicine were there during the latter part of that wonderful decade.

In 1889, William Crawford Gorgas, who later collaborated with Reed and Carroll in their efforts to free the world from yellow fever, was walking the streets of Oklahoma City. He was then a young physician in military service and was attached to the army post adjacent to Oklahoma City at the time of the opening. Fifteen years later, Walter Reed wrote Gorgas, "The news from Havana is simply delightful. It shows that your acquaintance with the local conditions was much better than mine. That you have succeeded in throttling the epidemic appears beyond question and it is to your everlasting credit. A man of less discretion, enthusiasm and energy would have made a fiasco of it. Whereas you, my dear Gorgas, availing yourself of the results of the work at Camp Lazear, have rid that pest hole, Havana, of her yellow plague. All honour to you, my dear boy!"

Gorgas' work in the Panama Canal zone is well known. After thousands had died in the attempt to build the canal, Gorgas made the adventure relatively safe.

It is interesting to note that a Baltimore barefoot boy, an Oklahoma City Eighty-niner, should render such a great service to humanity and at last receive the plaudets of the whole world while he slept under the stars and stripes at St. Pauls in London, and later in Washington, where his body lay in state four days before it was conveyed to its beautiful resting place in Arlington.—L. J. M.

Noted Vitamin Scientist on Borden Staff

The Borden Vitamin Company, which has been bringing into its fold a number of research and production leaders in that field, announces that Dr. Hugh H. Darby, distinguished Columbia scientist and author of many authoritative works, has joined its staff for research and development in the production and application of vitamins and hormones.

Doctor Darby, who has been with the Department of Biochemistry of the College of Physicians and Surgeons for the past seven years as research associate, is a specialist there on vitamins and hormones, achieving wide attention for his work on the extraction and physiology of sex hormones.

THE BEGINNING OF ORGANIZED MEDICINE IN OKLAHOMA

Basil A. Hayes, M.D.
Oklahoma City, Oklahoma

The first medical meeting ever held in what is now the State of Oklahoma was on a spring afternoon 61 years ago. It was on April 18, 1881, and was in Muskogee, Indian Territory. In the minutes of the meeting, the town's name was spelled M-u-s-c-o-g-e-e, and they read in part as follows:

"At 2:00 P. M. a number of medical gentlemen met, pursuant to a previously circulated call for a mass convention for the purpose of medical organization. The convention was called to order by Dr. B. F. Fortner, who nominated Dr. G. W. Cummings to the chairmanship of the convention, which was unanimously confirmed. The organization was completed by the election of Dr. Cutler, vice-president, and Drs. Fortner and C. Harris as secretaries. The chair proceeded to state the object of the meeting by reading the original call and address appended. The chair proceeded to appoint a committee on Constitution and By-Laws, consisting of B. F. Fortner, M.D., and Felix McNair, M.D. Several communications from gentlemen professionally detained at home were read, prominently among which was one from Dr. L. M. Cravens of the Cherokee Nation, for which the convention returned a vote of thanks. Convention adjourned until 9:00 A. M. tomorrow."

The next day the organization was completed by electing Dr. B. F. Fortner, of Claremore, President. Dr. G. W. Cummings, of Muskogee, was made first Vice-President, and Dr. Felix McNair, of Locust Grove, second Vice-President. Dr. M. F. Williams, also of Muskogee, was elected Secretary; and Dr. R. B. Howard, of Fort Gibson, Treasurer. Dr. E. P. Harris, address not given, was elected Librarian. A Board of Censors was named consisting of C. Harris, E. P. Harris, J. R. Cutler, W. T. Adair, and W. H. Bailey. Other members were S. F. Moore, of Webbers Falls; A. W. Foreman, of Vinita; A. Y. Lane, of Claremore; L. M. Cravens, of Tahlequah; W. T. Adair, of Tahlequah; H. Lindsey, of Eufaula, and R. O. Trent, address unknown. They also voted in an honorary member, Dr. Clegg, of Siloam Springs, Arkansas, who was present and read a paper on "The Use of Calomel in Malarial Diseases."

It was the intention of this group to meet every six months, and it assembled again at Muskogee on September 14, of that same year. Five men had been assigned subjects upon which they were to read papers, but not one was ready, so the first day's activity consisted only of a business meeting. On the following day, Dr. Fortner presented a case of "fracture of the cranium with remarks:" Dr. C. Harris reported a case of gelsemium poisoning, giving in detail his treatment. Dr. Bailey reported a case of typho-malarial fever, treatment consisting mainly of carbolic acid. A case of heart disease was presented by Dr. Fortner and discussed by various members of the Society. Also at this meeting, the usual discussion regarding incompetent practitioners was brought up, and "it was moved that the secretary draw up resolutions expressive of our views in relation to the practice of medicine by others and those newly qualified and educated for that purpose." The resolution requested "the Chief of the Cherokee Nation cooperate with us and see that the law is enforced." It was decided that the next meeting would be held at Eufaula on February 22, 1882, and the Society adjourned.

No further minutes are available, yet the pages of the book are intact. One must assume, therefore, that this Society died for want of support and was not resurrected until seven and one-half years later. This time, again, the meeting was called in Muskogee. The date was June 28, 1889, and the minutes read as follows:

"Pursuant to a previously circulated call, a number of physicians met in the Southern Methodist Church in the City of Muskogee on the morning of June 28, 1889, for the purpose of medical organization. The meeting was called to order by Dr. Callahan, after religious services conducted by Reverend J. Y. Bryce. Dr. R. A. Burr was called to the Chair and Dr. Bagby elected temporary secretary. The object of the meeting was then stated, and in a few appropriate words Drs. Harris and Burr welcomed the visiting gentlemen. Dr. Fortner then read the names and credentials of twenty-two applicants. The Chair then appointed Drs. Fortner and Callahan a Committee on Credentials, who after consultation made the following report:

"We, the Committee on Credentials for the convention, beg to report that we have in our hands twenty-two applications for membership, all claiming, as we believe justly, graduation from colleges of medicine recognized by the American Association of Medical Colleges of the United States, and your committee recommends that the convention proceed to organize a medical association in pursuance of its original purpose with the following members: A. W. Foreman, Vinita; M. F. Williams, Muskogee; J. R. Brewer, Muskogee; J. O. Callahan, Muskogee; Charles Harris, Muskogee; R. A. Burr, Choteau; C. A. Pennington, Choteau; R. L. Fite, Tahlequah; F. B. Fite, Tahlequah; E. N. Allen, McAlester; G. R. Rucker, Eufaula; D. Dunn, Bartlesville; C. P. Linn, Claremore; A. J. Lour, Oowala; J. C. Blaud, Red Fork; G. W. Cleveland, Wagoner; G. A. McBride, Fort Gibson; W. J. Adair, J. T. Jones, Tulsa; Oliver Bagby, Vinita; B. F. Fortner, Vinita; J. S. Lankford, Atoka; E. P. Harris, Savanna."

After this second beginning, the Indian Territory Medical Association met regularly every six months. Meetings were held in Fort Gibson, South McAlester, Muskogee, Vinita, Wagoner, Atoka, and Claremore. After the third year, the program was broken into three groups, consisting of the Practice of Medicine, Obstetrics and Gynecology, and Surgery. Each years its membership grew in numbers and strength, until it attracted men even from Arkansas, Texas, and Kansas. Among others, Jabez Jackson of Kansas City attended regularly and contributed many papers and discussions to its programs. Finally, in 1906 it gave up its identity by merging with another association which had been formed in the unsettled land then known as Oklahoma Territory.

This country had been opened to settlement April 21, 1889, and along with the settlers came doctors of various kinds. About one year later a meeting was held in Guthrie for the purpose of organizing a Territorial Medical Association. The effort was unsuccessful and another was held in Edmond for the same purpose, but it likewise failed. Meanwhile, three local societies had been organized and were functioning, one in Guthrie, one in Oklahoma City, and one in El Reno. Notwithstanding this, the Oklahoma Medical Journal was begun in January, 1893, at Guthrie by Drs. E. O. Barker, H. P. Halsted, and Joseph Pinquard. In March of that year, it published the following editorial:

"Is it not about time for the doctors of this Territory to organize a Territorial Medical Society? Every state and territory except Oklahoma has a successful medical society, and Oklahoma with three hundred or more physicians without a territorial society is behind the times. We as practitioners, if we hope to keep to the front and alive to the advance of medical science, must have a place where we can meet and exchange ideas and form more friendly and closer relations.

"The Journal wishes to propound the following questions, and upon the answers will depend the organization of a Territorial Medical Society.

Question 1. Doctor, are you willing to lend your presence and what other assistance you can to the organization of a Territorial Medical Society?

Question 2. What place, in your opinion, would be the most satisfactory for the physicians to meet for organization?

Question 3. In your opinion, what date would be most acceptable to the profession?

"If sufficient answers are received, showing a desire on the part of the doctors of the Territory for an organization, we will issue a call through the Journal at a time and place indicated by the answers to the foregoing questions.

"We hope that each doctor will take sufficient interest to drop us a card immediately."

Evidently the appeal was successful and aroused a good response for the next issue we find the following:

"Territorial Call of Physicians"

"The physicians of Oklahoma Territory will meet in Oklahoma City, on May 9, 1893, for the purpose of organizing a Territorial Medical Society. The answers to the questions in the last month's Journal in reference to a territorial organization have been sufficient in number to make it advisable; a large number of physicians having responded with their approval of such a movement.

"From the answers received, we find that the most suitable place is Oklahoma City, and the time May 9th.

"In order to expedite business when we do met, we will make the hour 3:30 P.M. at the Grand Avenue Hotel."

Accordingly, on the date specified, a group of doctors met in the commercial clubrooms of the Grand Avenue Hotel and organized themselves into the Oklahoma Territorial Medical Association. The meeting was called to order by Dr. W. R. Thompson, of Oklahoma City, and Dr. E. O. Barker, of Guthrie, was elected temporary Chairman. A committee of five on permanent organization was appointed by the Chair, consisting of Dr. C. A. Cravens, of Oklahoma City; Dr. J. A. Overstreet, of Kingfisher; Dr. W. B. Camp, of Tecumseh; Dr. N. W. Mayginnes, of Stillwater; and Dr. H. P. Halsted, of Guthrie.

Dr. DeLos Walker, of Oklahoma City, was elected president of the new association. The Committee on Constitution and By-Laws recommended the adoption of the constitution and by-laws of the Indian Territory Medical Society, except that the dues were to be one dollar per year instead of two dollars per year. A scientific program was then heard and the meeting adjourned to convene again November 2nd and 3rd, 1893, at El Reno. Meetings were then held semi-annually in Oklahoma City, Guthrie, El Reno, Norman, and Shawnee, until 1904, at which time the association was reorganized along the lines laid down by the American Medical Association; and six months later it was decided to dispense with the fall meeting and merely have one annual meeting in the month of May. The following men were the charter members:

W. H. Clutter, Oklahoma City; J. M. Carson, El Reno; W. H. Snow, Norman; E. J. Trader, Council Grove; N. W. Mayginnes, Stillwater; DeLos Walker, Oklahoma City; J. R. McElvain, Oklahoma City; T. A. Cravens, Oklahoma City; J. A. Hatchett, El Reno; H. P. Halsted, Guthrie; B. L. Applewhite, Tecumseh; S. M. Barnes, Stillwater; W. McKay Dougan, Perry; A. A. Davis, El Reno; J. A. Overstreet, Kingfisher; J. E. Fenlon, Norman; J. M. Still, Noble; C. D. Arnold, El Reno; A. H. Jackson, El Reno; C. B. Bradford, Oklahoma City; J. A. Ryan, Oklahoma City; E. O. Barker, Guthrie.

This association continued to meet regularly until the year 1906, at which time it merged with the Indian Territory Medical Association to make the present Oklahoma State Medical Association.

War or No War—

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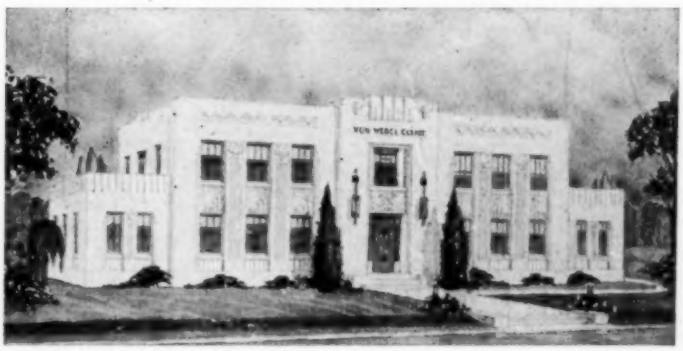

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COMMITTEE REPORTS

Committee Reports To Be Made Before House of Delegates

The following committees of the Association have elected to make verbal reports to the House of Delegates. The reports will be made at the first meeting of the House of Delegates, and in the regular order of business.

The committees are: Committee on Conservation of Hearing; Committee on Crippled Children; Committee on Study and Control of Venereal Diseases; Committee on Benevolent Fund; Committee on Credentials; Committee on Annual Session; Committee on Scientific Work; Committee on Medical Education and Hospitals; Committee on Publicity; and the Committee on Public Policy.

ANNUAL REPORT OF DISTRICT NO. 5

To the President and House of Delegates
Of the Oklahoma State Medical Association

Gentlemen:

In reporting the activities of the Councilor of the Fifth District, I hope you will consider the frailties of the flesh, for at times the heart is willing where the flesh is weak.

The Fifth District consists of nine counties with a membership of 119 members: Caddo with 22 members, Carter 26, Comanche 15, Cotton 7, Grady 19, Jefferson 10, Murray 8, Stephens 13, and Love with two or three belonging to Carter county. Of these the larger counties have very active societies, while the smaller do not have enough members to meet regularly.

Most of the counties with the exception of my own have doctors who are not members of the Association.

Your Councilor visited only one society during the year, with the exception of a Councilor District meeting held at Ardmore, January 12, which was attended by about half of the membership of the district. Ardmore was a delightful host to this meeting and all those who did not attend it certainly missed a treat both up and down stairs. The meeting was held at the Ardmore Hotel, beginning with a supper, or rather a "get-together" upstairs which inspired everyone present.

The Speakers for the evening were Dr. Finis W. Ewing, President of the Association; Dr. Lewis H. Ritzhaupt, State Medical Officer; and Mr. Graham, Executive Secretary of the Association. Several guests from Oklahoma City were present.

My program for the coming year will consist of about four meetings of this type, which I believe are of more benefit than just visiting the county societies. There has been no trouble or discord in our District during the year.

Respectfully submitted
J. I. Hollingsworth, M.D.
Councilor District No. 5

ANNUAL REPORT OF DISTRICT NO. 8

To the President and House of Delegates,
Oklahoma State Medical Association

Gentlemen:

I will be frank and admit that during the past year very little has been accomplished in the 8th Councilor district so far as new constructive work is concerned.

The following County Medical Societies are active and, I believe, have held regular meetings during this period: Okmulgee, Ottawa, Muskogee, Craig and Cherokee.

I am not thoroughly acquainted with Mayes, Delaware, Adair, Sequoyah and Wagoner. Mayes and Wagoner are organized but have not functioned with regular meetings.

Delaware, Adair and Sequoyah have no organization as very few physicians live in these counties and some hold their membership in adjoining County Societies.

Okmulgee, Cherokee, Craig and Ottawa have had some very interesting programs which has stimulated interest in these County Medical Societies.

The Muskogee County Medical Society has cut its regular meeting from two per month to one per month, this due to the increased work the membership has at this time.

Wagoner and Sequoyah have combined with Muskogee to form the Muskogee-Sequoyah-Wagoner County Medical Society. We are hoping in this way to create more interest in this section. This has not been approved as yet by the Council but I am taking the liberty of reporting this without the approval of the Council as these three County Medical Societies have voted for amalgamation.

Respectfully submitted,
SHADE D. NEELY, M.D.
Councilor District No. 8

ANNUAL REPORT OF DISTRICT NO. 9

To the President and House of Delegates of the
Oklahoma State Medical Association

Gentlemen:

I herewith tender you my report for the year 1941-42 for the Judical District No. 9, Oklahoma State Medical Association.

I have visited each of the County Societies comprising this district and wish to report to you they are in a healthy condition, are active and meeting regularly with good programs being presented to the membership.

While McIntosh County has a very small membership, the Society is meeting regularly and has in Doctors Little and Tolleson two enthusiastic officers, who at all times are working for the furtherance of orthodox medicine in Oklahoma. I have visited them several times and assisted in every way called upon in their problems presented.

LeFlore County Medical Society has only recently resumed regular meetings, having suspended meetings for a few months during the winter season. They have a healthy membership and I predict for them a good year. At the meeting on March 12, two pioneers in Organized Medicine in eastern Oklahoma were presented tokens of esteem by the Society for having been in the practice of medicine for 40 years. These two pioneers are Doctors E. L. Collins and S. C. Dean of Panama and Howe, respectively. Also as a token of their good wishes in his new location and as an appreciation for the good work done in the LeFlore County Medical Society, a token was presented to Doctor W. L. Shippey. Doctor Shippey has just recently re-moved to Fort Smith.

Pittsburg County has been active, meeting regularly with good programs being presented at each meeting. Doctor E. D. Greenberger, the Secretary, has been very energetic in obtaining membership in the County Society of practically every doctor in Pittsburg County who is eligible to membership.

Latimer County does not have a Medical Society and does not at the present time have sufficient doctors in the county to justify the organization of a society. The same is also true of Haskell County. The doctors of Latimer County belong to either Pittsburg or LeFlore County Medical Societies.

It is my suggestion that Latimer County join with LeFlore County Medical Society forming the LeFlore-Latimer Medical Society. And that Haskell County join with McIntosh County forming the McIntosh-Haskell Medical Society.

Respectfully submitted,
L. C. KUYRKENDALL, M.D.
Councilor District No. 9

Report of the Committee on Necrology

The Committee on Necrology submits the following report to the House of Delegates:

Medicine's duty to humanity in the present world emergency will find physicians on all fronts. Their duty will be to save rather than to take life. Many will pay the supreme sacrifice on the battle front, many will do likewise on the home front.

As the years go on through war and peace, the physician will continue to give of himself without thought of himself. To those who no longer will hear the roll of battle drums in the call of duty, all homage is paid. Theirs has been a battle fought and won. We must carry on.

In honor of those members of the Association who have passed away during the last year, the Necrology committee submits the following resolution for adoption by the House of Delegates:

WHEREAS: Thirty-nine of our members have passed to the Great Beyond since the 1941 report of the Necrology committee of the Association, be it

RESOLVED: That the House of Delegates of the Oklahoma State Medical Association recognize the demise of these former fellow members and instruct the Secretary-Treasurer to inscribe with honor and regret the following names upon the records of the Association:

George W. Sisler	Tulsa	March 23, 1941
A. T. Hill	Stigler	April 21, 1941
*Calbert Harvey Beach	Glencoe	May 15, 1941
Peter Cope White	Tulsa	May 26, 1941
*J. E. Jones	Hollis	May 23, 1941
S. N. Mayberry	Enid	June 22, 1941
Charles D. Johnson	Tulsa	June 22, 1941
Edmund S. Ferguson	Oklahoma City	June 28, 1941
*Charles R. Silverthorne	Woodward	July 27, 1941
J. R. Holliday	Oklahoma City	August 7, 1941
*A. J. Welch	McAlester	Sept. 7, 1941
Allen G. Flythe	Durant	Sept. 21, 1941
J. C. Warmack	Oklahoma City	Sept. 26, 1941
*McClellan Wilson	McAlester	Oct. 15, 1941
C. T. Arrington	Oklahoma City	Oct. 18, 1841
C. J. Forney	Woodward	Oct. 24, 1941
*T. M. Boyd	Norman	Oct. 29, 1941
J. A. Rutledge	Ada	Nov. 2, 1941
C. K. Logan	Hominy	Nov. 14, 1941
Ruth B. Jones	Seminole	Nov. 29, 1941
Dick Lowry	Oklahoma City	Dec. 2, 1941
Jesse Bird	Oklahoma City	Dec. 9, 1941
J. B. Hix	Altus	Dec. 13, 1941
J. L. Adams	Hobart	Dec. 31, 1941
O. N. Windle	Sayre	Jan. 3, 1942
*J. W. Browning	Geary	Jan. 9, 1942
I. B. Oldham, Sr.	Muskogee	Jan. 15, 1942
*C. S. Bobo	Norman	Feb. 3, 1942
John Kuhn, Sr.	Oklahoma City	Feb. 13, 1942
F. P. Von Keller	Ardmore	Feb. 13, 1942
G. D. Funk	El Reno	Feb. 26, 1942
Thomas R. Lutner	Lawton	March 7, 1942
*A. M. Young, Jr.	Oklahoma City	March 18, 1942
D. B. Stough	Vinita	March 19, 1942
A. C. Jenner	Durant	March 19, 1942
*Edward M. Harris	Cushing	
William C. Sain	Ardmore	March 7, 1942
G. R. Norman	Tulsa	Jan. 21, 1942
John Davis	Seminole	

Requiescat in Pace!

*Honorary

Respectfully submitted
R. M. Anderson, M.D., Chairman
John A. Haynie, M.D.
W. H. Livermore, M.D.

Report of the Committee on Judicial And Professional Relations

The Committee on Judicial and Professional Relations submits the following report to the House of Delegates:

Your Committee on Judicial and Professional Relations established under the new constitution and by-laws has not been presented with any questions coming under its jurisdiction concerning compensation for injuries said to have resulted from malpractice other than those cases which have been brought to the attention of the committee by requests for assistance from the Medical Defense fund.

During the 1941-42 period, five requests for assistance from the fund have been received and the assistance granted. Of these cases, one has been settled by a verdict in favor of the defendant, one in favor of the plaintiff, one dismissed, and the other two are awaiting disposition. The committee desires to express its appreciation for the manner in which cooperation has been received from those members requesting assistance and respectfully desires to reaffirm the splendid place this fund takes in the affairs of the Association.

On April 1 in addition to bonds held to the account of the Medical Defense fund as reported in the audit of the Association, there is on hand in cash the sum of $1,438.34.

Respectfully submitted
A. S. Risser, M.D.
L. C. Kuyrkendall, M.D.
J. M. Bonham, M.D.

Report of the Committee On Postgraduate Medical Teaching

The Committee on Postgraduate Medical Teaching submits the following report to the House of Delegates.

The postgraduate program in pediatrics conducted by James G. Hughes, M.D., of Memphis, Tennessee, which ended January 31, 1942, was a success from every viewpoint. The course was offered in 45 teaching centers. Additional instruction was given in Oklahoma City and Tulsa for the benefit of colored physicians. Total registration numbered 782. Doctor Hughes held 979 consultation with physicians, and spoke before a total of 6,239 citizens in his lay talks. The first circuit only, in northeastern Oklahoma, was given by Drs. Wayne A. Rupe, Peter G. Danis, and Stanley Harrison, all of St. Louis, Missouri.

The attendance throughout the state was excellent, in view of the severe epidemic of influenza which occurred during the first winter, and the call to military duty of so many of our physicians who have participated in these courses. Registration fees were refunded to those who were called to active duty between the date they enrolled and the date instruction began in their community.

Receipts from all sources amounted to $31,038.91. Total disbursements were $24,851.55. Balance at the close of the program was $6,187.36, which amount was prorated back to the contributing agencies. Bound copies of the instructor's lectures were distributed to all physicians enrolled, and a total of 600 Certificates of Attendance were issued to those whose attendance averaged 70 percent, or more.

The Committee desires to thank The Commonwealth Fund of New York, the Oklahoma State Health Department, the U. S. Children's Bureau, and the Oklahoma State Medical Association for their financial assistance, and further recommends that the House of Delegates, by resolution, express its appreciation to these contributing agencies.

We are also pleased to report that a two-year program in internal medicine is now in progress. L. W. Hunt, M.D., Assistant Professor of Medicine, University of Chicago, began instruction in northeastern Oklahoma, March 9. The teaching centers for the first circuit are Miami, Vinita, Pryor, Claremore and Bartlesville. Over 80 percent of the physicians practicing in this section of the state have enrolled, and during the first two weeks Doctor Hunt has held 48 consultations.

Further information regarding this course may be obtained at the Postgraduate Booth during the State

Medical Meeting at Tulsa, or by writing the Postgraduate Committee, Oklahoma State Medical Association, 210 Plaza Court, Oklahoma City.

Respectfully,

Henry H. Turner, M.D., Chairman,
M. J. Searle, M.D.
H. C. Weber, M.D.

Report of the Committee on the Study And Control of Cancer

The Committee on the Study and Control of Cancer submits the following report to the House of Delegates:

The Cancer Committee during the past year has devoted its work to the assistance of the program of the Women's Field Army of the American Society for the Control of Cancer.

The Women's Field Army annually sponsors an educational program on early diagnosis and treatment of cancer through the Federation of Women's Clubs of the state. During the months of April and May, their enrollment drive is made, and it is from this money that the program is financed.

In the past, the Cancer committee has annually asked for an appropriation of $750.00 from the Association to assist the work of the Committee and the Women's Field Army. However, the work accomplished for the Committee since the establishment of a full-time office for the Association no longer makes it necessary to ask for this appropriation.

Committee work during the coming two months will be heavy, since these are the months of the educational program of the Women's Field Army. Each County Medical society will be asked by the local county Captain of the Field Army to assist in the drive, in so far as it pertains to the educational feature. Doctors will not be asked to solicit enrollments.

Your Committee urges every county society to assist the women in their educational work and to enrol personally, if you feel able.

Your Committee commends and endorses the work being done by the Women's Field Army.

Your Committee also strongly recommends to the county societies that they take the initiative in sponsoring cancer education in the highschools and colleges of the state, and that through the Chairman of the Cancer committee at least one program on this second highest cause of death be made available annually to the schools.

Respectfully submitted
C. P. Bondurant, M.D., Chairman
W. S. Larrabee, M.D.
Paul B. Champlin, M.D.

Report of Committee on Medical Economics

The Committee on Medical Economics submits the following report to the House of Delegates:

Your Committee at the 1941 session of the House of Delegates reported its recommendations on the important problem of assisting the Department of Public Welfare in its Aid to Dependent Children Fund. It is now further gratifying to be able to report that upon the adoption of the report by the House of Delegates, the President at the request of the Council immediately contacted the Director of the Department of Public Welfare, and from that meeting, a committee composed of C. R. Rountree, Chairman, F. Redding Hood, R. M. Shepard, Clinton Gallaher and A. R. Sugg was appointed to give advice and aid on medical matters concerning the operation of the fund.

Since this Committee will report in detail, no further comment will be made except to commend the Council upon its outstanding accomplishments.

During the past year, the Committee has had occasion to study the problem of organized medicine and its place in the program of the Farm Security Administration's health projects for its clients.

The Committee, before meeting with representatives of the F.S.A., took a survey of the past and present programs of this type in operation in the state, and the conclusions drawn from this survey could not be made definite. In the main, the reports from the different societies were to the effect that the programs were not satisfactory for reasons of administration, inequalities and low fee payments for services rendered.

Upon meeting with F.S.A. representatives concerning this program, certain objectionable features seemed to have been eliminated, but your Committee at this time cannot report further upon the attitudes of the county societies concerning the operations of the plans under the revised system.

Your Committee recommends that no endorsement of the Farm Security Administration plans be made by the House of Delegates, but that the cooperation of organized medicine be left to the discretion of the local county societies after careful and complete study.

Your Committee further recommends that the study of its relations to the voluntary feature of medicine in medical economics by the State Association be given every impetus possible by the House of Delegates and that the Council keep constant vigil on this important phase of medicine as it pertains to world conditions and its relations to the voluntary feature of medicine in America today.

Respectfully submitted
Horace Reed, M.D., Chairman
W. A. Howard, M.D.
McLain Rogers, M.D.

Report of Committee on Industrial and Traumatic Surgery

The Committee on Industrial and Traumatic Surgery submits the following report to the House of Delegates:

Your Committee met on March 15, in Tulsa, with the Industrial committee chairmen of 22 County Medical societies of the Association, and after a discussion of the problems of medicine in industry, has the following recommendations to make to the House of Delegates:

1. That a series of programs on Industrial Medicine and Surgery be held in connection with either County Medical societies or councilor district meetings, and that speakers for these meetings be arranged for through either the State Association or the American Medical Association.
2. That the scientific program of the State Association have included in its program papers on Industrial Medicine and Surgery.
3. That the Editorial Board be requested to devote part of the Scientific section of the Journal to problems of industrial medicine.

Your Committee is further of the opinion that the war effort of the United States will rapidly develop and enlarge the field of Industrial Medicine and Surgery, and that every effort should be made by organized medicine to meet these needs. It is the opinion of the Committee that the above recommendations if adopted will materially assist to that end.

Respectfully submitted.
I. W. Bollinger, M.D., Chairman
O. S. Somerville, M.D.
W. G. Chestnut, M.D.

Report of Committee on Public Health

The Committee on Public Health submits the following report to the House of Delegates:

During the past year, your Committee has advised and cooperated with the Department of Health in its program of child immunization.

The recommendations of the Committee were transmitted to the Council, and the Council acted upon these in the affirmative.

This program is now in operation in the state and since each County society has been advised of its scope, it will not be repeated in this report.

Your Committee wishes to commend to the House of Delegates the work of the Department of Health and particularly the Commissioner, Dr. Grady Mathews, for the efforts made by his department in the field of public health and the cooperation given organized medicine.

It is the feeling of your Committee that preventive medicine will be expanded during the time necessary for the winning of the war and that organized medicine should give and expend its entire facilities and energies to accomplish this important defense measure.

Respectfully submitted
Carroll M. Pounders, M.D., Chaiman
G. S. Baxter, M.D.
H. K. Riddle, M.D.

Report of the Committee on Maternity and Infancy

The Committee on Maternity and Infancy submits the following report to the House of Delegates:

NEW MATERNAL MORTALITY FORMS READY

Two Dollars Paid for Completion and Return

As soon as the exact causes of death and their modifying factors are definitely known, instead of being hidden by the present brief and obscure "death certificate," a substantial reduction in Oklahoma's maternal mortality rate is certain to occur.

The House of Delegates voted to conduct a maternal mortality survey at the last meeting of the Oklahoma State Medical Association. During the past year, this has been carried on through the Committee on Maternity on Infancy, and the plan adopted is a composite of several plans which have been brilliantly successful in other localities. Many of these have served to reduce maternity and infancy mortality rates by a spectacular decline. Sample questionnaires were obtained from these localities, and from these a form more suitable for Oklahoma was composed.

The new form was put into trial use on several instances in order to "iron out the kinks," and has recently been made available for state-wide use.

Speed Is Essential

Other states have found that the greatest single factor in making these forms effective was their prompt completion by the physician who had signed the death certificate. For this reason, a fee of two dollars will be paid the physician who completes and forwards this form promptly. The questionnaire is based on a chronological history of the patient's pregnancy and is therefore easily completed.

Causes of Death Exposed

The present form of death certificate leaves much to be desired when attempting to analyze and correct causes of obstetrical death. The present certificate may list, for instance, "death from hemorrhage," and this may be correct, but it fails to state that the patient lived twenty miles over sandy roads, or that she refused the doctor's advice until it was too late, or that no donors were available.

It is now universally recognized that eclampsia is preventable, but eclampsia can be prevented only when the patient consults the physician early enough, and then follows the doctor's orders. All such information is missing on the present death certificate, and for many years Oklahoma physicians have smarted under the stigma of a high maternal mortality rate, which may or may not have been ascribable to them. The present survey will not only clarify these factors, but will also, if followed through, attack each cause of death as a separate problem.

In the City of Philadelphia, the maternal mortality rate was stationary for many years. Within a short time after the individual deaths were analyzed, the death rate was reduced by one-half. A similar detailed study in Oklahoma is certain to bear valuable fruit.

Method of Survey

When an "obstetrical death" occurs, the Bureau of Vital Statistics will fill out the first page of the new questionnaire, subsequently forwarding it to the doctor signing the death certificate.

The remaining questions follow in easy sequence, and serve to paint the complete picture of that patient's death.

It is to be emphasized that there is no effort being made to fix blame or pin responsibility. The results will be forever anonymous, and the sincere purpose is not to accuse the doctor, but to prevent another patient from dying. The Committee sincerely hopes you will never be called upon to fill out this form, but if you are, please do so promptly, cheerfully, and accurately. You will be paid for your effort.

Respectfully submitted,
Charles Ed White, M.D., Chairman
J. B. Eskridge, M.D.
J. H. Veazey, M.D.
Edward N. Smith, M.D.
J. T. Bell, M.D.

Report of the Committee on Conservation of Vision

The Committee on Conservation of Vision submits the following report to the House of Delegates:

Your Committee on the Conservation of Vision wishes to report that, after due consideration and deliberation, world events made it inadvisable to attempt to function at the present time.

The State of Oklahoma is very backward in handling its visual conservation setup. The dread disease of Tracoma has passed out of the picture. However, the numerous blind pensioners continue to have their ranks filled because of ignorance both within the medical profession and the laity.

The need of Oklahoma is:

1. Education of the physicians.
2. Education of the teachers.
3. An improvement in the handling of the defective eyes during the school age.

Your Committee endeavored to start such a program throughout Oklahoma, but due to the increased amount of work incurred by the draft, deemed it best not to attempt to function at a necessarily inadequate program.

Your Committee recommends that when the emergency has disappeared the State Medical Association make as one of its major projects the sadly deficient Ophthalmological setup in Oklahoma.

C. H. Haralson, M.D., Chairman
E. H. Coachman, M.D.
F. Maxey Cooper, M.D.

Report of Committee on Study and Control Of Tuberculosis

The Committee on Study and Control of Tuberculosis submits the following report to the House of Delegates:

The State of Oklahoma has a large incidence of tuberculosis which is not being lowered. In fact, it is increasing. This is not occurring in other states where proper measures are taken.

There is not proper supervision of tuberculosis patients in the state who are not hospitalized in one of the state sanatoria. Some counties have efficient State Health organizations which are doing good work, but there are far too many who are not supervised by these units.

Our sanatoria are only able to hospitalize about one-half of the patients who apply, and while we believe these organizations are doing excellent work, we believe there should be definite organizations for the control and treatment of tuberculosis in the state of Oklahoma, the organizations to be intelligently handled and have definite functions.

The bed space should be increased in the two state sanatoria and appropriations substantially increased to take care of these patients. The patients who can obtain competent medical supervision at home, and proper supervision from a public health standpoint, or where they are financially able to seek competent private care, should be advised to do so.

Therefore, we believe the following resolutions and recommendations are in order:

1. Be it resolved that this committee go on record as recommending a unified control of tuberculosis as to survey, care and treatment, and that a budget be prepared that will allow enough money to care for these patients and provide and equip the present sanatoria with increased bed capacity.

2. Furthermore, be it resolved that some attempt be made to secure federal funds to aid in hospitalization and care of the tuberculous. Since our country is in total war and the care of the citizens and soldiers' dependents is very vital to the nation's defense, we believe that some federal funds should be allotted in each state for the purpose of care and supervision of people suffering from tuberculosis of the lungs.

Respectfully submitted
F. P. Baker, M.D., Chairman
R. M. Shepard, M.D.
Carl Puckett, M.D.

Supplementary Report

In support of the report by the Committee on Study and Control of Tuberculosis, prepared by Dr. F. P. Baker, Chairman, I submit the following supplementary report to emphasize the first recommendation, and which may be classed as a minority report. I am "all out" for the chairman in his attempt to bring order out of the present chaos:

Unified control of tuberculosis will be well under way when the supervision of the tuberculosis sanatoria is placed under the State Health Department, where they were from the time of establishment until 1937 when transferred to the State Board of Public Affairs. Tuberculosis is a communicable disease and its supervision and control therefore belongs to the Health Department, and the santoria are a part of the State system of tuberculosis control.

Every physician should lend his influence at the ballot box for making this legal change back to the Health Department at the next session of the Legislature. Other necessary improvements may then be made within this properly coordinated set-up.

Respectfully submitted
Carl Puckett, M.D.

ANNUAL AUDIT REPORT

Mr. R. H. Graham, Executive Secretary
Oklahoma State Medical Association
210 Plaza Court
Oklahoma City, Oklahoma

Dear Sir:

We have completed the audit of the financial records of

THE OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma

for the period from January 1, 1941, to December 31, 1941, and submit herewith the following Exhibits:

EXHIBIT "1"—BALANCE SHEET
EXHIBIT "2"—STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS
EXHIBIT "3"—OPERATING STATEMENT
EXHIBIT "4"—BANK RECONCILIATION

EXPLANATION

Since the Association operates on a Cash Receipts and Disbursements basis, the disbursements for December, which are paid in January, are included in the report for the following year.

We wish to thank you for this audit, and if we can be of further service, please feel free to call upon us.

Respectfully submitted,

H. E. COLE COMPANY

OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma

Exhibit I

BALANCE SHEET
Dec. 31, 1941

ASSETS

	Total	Membership Fund	Journal Fund	Medical Defense Fund	Annual Meeting
Petty Cash	$ 14.94	$ 14.94	$	$	$
Bank	3,930.30	2,126.54	834.42	309.34	660.00
U. S. Treasury Bonds	6,178.88	1,235.78		4,943.10	
National Defense Bonds	2,220.00			2,220.00	
TOTAL ASSETS	$12,344.12	$ 3,377.26	$ 834.42	$ 7,472.44	$ 660.00
LIABILITIES & RESERVES					
1942 Membership Dues	$ 10.00	$ 9.00	$	$ 1.00	$
Operating Reserve	12,334.12	3,368.26	834.42	7,471.44	660.00
TOTAL LIABILITIES & RESERVES	$12,344.12	$ 3,377.26	$ 834.42	$ 7,472.44	$ 660.00

OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma

Exhibit 2

STATEMENT OF CASH RECEIPTS & DISBURSEMENTS
January 1, 1941 to December 31, 1941

	Total	Membership Fund	Journal Fund	Medical Defense Fund	Annual Meeting
Cash Balance—January 1, 1941	$ 3,136.55	$ 660.68	$ 1,442.53	$ 993.34	$ 40.00
Petty Cash Balance—January 1, 1941	10.00		10.00		
RECEIPTS:					
1941 Membership Dues	13,989.15	12,562.15		1,427.00	
1942 Membership Dues	10.00	9.00		1.00	
Journal Advertising & Subscriptions	7,213.01		7,213.01		
U. S. Government Bond Interest	135.00	27.00		108.00	
Annual Meeting	2,410.40				2,410.40
TOTAL CASH TO BE ACCOUNTED FOR	$26,904.11	$13,258.83	$ 8,665.54	$ 2,529.34	$ 2,450.40
DISBURSEMENTS:					
1940 Social Security Paid	$ 18.45	$ 18.45	$	$	$
National Defense Bonds Purchased	2,220.00			2,220.00	
Expenses for 1941	20,720.42	11,098.90	7,831.12		1,790.40
TOTAL DISBURSEMENTS	$22,958.87	$11,117.35	$ 7,831.12	$ 2,220.00	$ 1,790.40
Bank Balance—December 31, 1941	$ 3,930.30	$ 2,126.54	$ 834.42	$ 309.34	$ 660.00
Petty Cash Balance	14.94	14.94			
	$ 3,945.24	$ 2,141.48	$ 834.42	$309.34	$ 660.00

OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma

Exhibit 3

OPERATING STATEMENT
1941

REVENUE

	Total	Membership Fund	Journal Fund	Medical Defense Fund	Annual Meeting
1941 Membership Dues	$13,989.15	$12,562.15	$	$ 1,427.00	$
Journal Advertising & Subscriptions	7,213.01		7,213.01		
U. S. Government Bond Interest	135.00	27.00		108.00	
Annual Meeting	2,410.40				2,410.40
TOTAL REVENUE	$23,747.56	$12,589.15	$ 7,213.01	$ 1,535.00	$ 2,410.40
EXPENSES					
Salaries	$ 7,166.82	$ 3,886.82	$ 3,280.00	$	$
Journal Printing & Mailing	3,834.29		3,834.29		
Press Clipping Service	36.00		36.00		
Journal Engraving	167.95		167.95		
Telephone & Telegraph	478.32	475.34	2.98		
Postage	626.12	560.97	65.15		
Office Rent	305.00	175.00	130.00		
Printing & Stationary	332.27	332.27			
Office Supplies	427.33	427.33			
Traveling Expense	1,029.12	842.02	187.10		
Council & Delegates Expense	574.86	574.86			
Social Security Tax	51.82	38.22	13.60		
Post Graduate Committee	2,000.00	2,000.00			
Office Equipment	175.24	175.24			
Annual Meeting	2,113.88	323.48			1,790.40
Returned Checks	1.50		1.50		
Certificate Frames	35.10	35.10			
Sundry	234.82	197.27	37.55		
Secretary's Conference	128.30	128.30			
Dr. Willour's Refund on Salary Overpayment	288.75	288.75			
Entertainment	246.87	246.87			
Dr. Long's Plaque & Picture	203.56	203.56			
Auditing & Legal	212.50	137.50	75.00		
Chamber of Commerce Dues	50.00	50.00			
TOTAL EXPENSES	20,720.42	11,098.90	7,831.12		1,790.40
Revenue over Expenses	$ 3,027.14	$ 1,490.25	—$618.11	$ 1,535.00	$ 620.00

OKLAHOMA STATE MEDICAL ASSOCIATION
Oklahoma City, Oklahoma

Exhibit 4

BANK RECONCILIATION
December 31, 1941

MEMBERSHIP FUND—Liberty National Bank			
Balance per Bank Statment		$2,498.74	
Outstanding Checks:			
Voucher No. 705—Richard H. Graham	$ 150.00		
Voucher No. 706—Dr. Finis Ewing	17.52		
Voucher No. 712—Skirvin Hotel	132.50		
Voucher No. 715—Postmaster	72.18	372.20	
Balance per Books			$2,126.54
JOURNAL FUND—Liberty National Bank			
Balance per Bank Statement		$ 886.27	
Outstanding Checks:			
Voucher No. 707—Dr. L. S. Willour	$ 50.00		
Voucher No. 708—Dr. L. S. Willour	1.85	51.85	
			$ 834.42
MEDICAL DEFENSE FUND—Liberty National Bank			
Balance per Books & Bank Statement			$ 309.34
ANNUAL MEETING FUND—Liberty National Bank			
Balance per Books & Statements			$ 660.00
TOTAL MONEY ON DEPOSIT			$3,930.30

New Treatment of Diarrhea in Babies

Before the advent of Mead's Pectin-Agar in Dextri-Maltose, there were two methods of treating diarrhea in infants: (1) the "starvation" or "rest" method, consisting of withholding food during the duration of the diarrhea, offering the baby water and carbohydrate solutions. While this succeeded in preventing extreme dehydration, the child received practically no food to maintain nutrition, so that, when long continued, his resistance was greatly impaired. (2) the "Finkelstein method," based on the theory that some carbohydrates are especially likely to cause fermentation and prolong diarrhea. His method consisted of high protein feedings in the form of protein milk, sometimes with added carbohydrate, and continues to have many advocates, especially in breast-fed infants. One of the successful modifications has been Casec (calcium caseinate), which can be used for both breast-fed and bottle-fed infants.

In recent years, the use of raw apple and weak tea for treating diarrhea has had various proponents. The literature contains reports by Birnberg, Reglien, Kaliski, Giblin and Lischner, McCaslan, Tompkins, Borovsky, Stein, and Hunt. Smith and Fried believe that any beneficial effects from scraped raw apple are due to the partial starvation effected by the regimen. The success of apple and tea therapy has stimulated hypotheses as to the effective agent. Moro attributed its value to tannic acid. Heisler would also give credit to malic acid and to the mechanical cleansing of the intestines, while Scheer places most emphasis on indigestible bulk. Malyoth believes pectin and cellulose are the active agents.

Based on their experience with apple, Winters and Tompkins devised a mixture of pectin, agar and Dextri-Maltose which was more successful. Others have privately confirmed their finding that a mixture of this nature is of value in diarrhea. Kutscher and Blumberg studied the use of the pectin-agar mixture with and without carbohydrate. They concluded that the addition of Dextri-Maltose to the other constituents was a definite advantage. Various reasons for the effectiveness of both pectin and agar have been advanced but none has a background of experimental proof. It has been claimed that pectin is bactericidal, that its constituent galacturonic acid functions as a detoxifying agent, that it absorbs toxins and enmeshes bacteria, that its hydrophilic nature prevents dehydration, and that it is soothing to an inflamed gastrointestinal tract. Bulk is the only valuable characteristic advanced for the use of agar.

In practice, the application of this method differs from the starvation method in that full caloric feedings are immediately instituted and maintained.

The new method differs from protein milk therapy in that a diet high in carbohydrate is fed. It also has the advantage of palatability, particularly important with older children.—Mead Johnson & Company, Evansville, Ind., U.S.A.

Opportunities for Practice

Opportunity for Practice

An opportunity for practice is open in the town of Hunter, in northeastern Garfield county. For more information, any physician interested in this opportunity should contact the office of the Association, 210 Plaza Court, Oklahoma City.

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* *Irritation of the nose and throat due to smoking.*

** *Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154.*

ASSOCIATION ACTIVITIES

450 Hear Dr. Mayo at Annual LeRoy Long Memorial Lecture

With approximately 450 people in attendance and with Dr. Charles W. Mayo of the Mayo Foundation, Rochester, Minn., as guest lecturer, the third LeRoy Long Memorial Lecture was held March 13, in the Auditorium of the Oklahoma University School of Medicine, Oklahoma City.

The lecture, which is conducted under the auspices of the Phi Beta Pi fraternity of the medical school, is an annual event. For the subject of his lecture, Doctor Mayo chose "Principles of Surgery of the Colon." He also exhibited a motion picture of a surgical operation.

General Robert U. Patterson, Dean of the medical school, opened the program with an introduction of Dr. R. M. Howard, Professor of Surgery at the medical school, who in turn introduced Doctor Mayo.

Oklahoma Pediatric Society Announces Program

Dr. Hugh L. Dwyer, Professor of Clinical Pediatrics, University of Kansas School of Medicine, Kansas City, Mo., and a guest speaker for the Annual Meeting, will appear on the Program of the Oklahoma Pediatric Society, Wednesday noon, April 22, at the Mayo Hotel, Tulsa.

Doctor Dwyer will speak to the Society on "Jaundice and Anemia of the New Born."

The Society will convene at 12:15 Noon, for a luncheon, business meeting and Doctor Dwyer's address.

Program for Medical School Alumni Meeting Is Announced

The following program for the Annual Meeting of the Oklahoma University Medical School Association, to be held at 12:00 noon, April 23, at the Tulsa club in Tulsa, has been announced. Dr. Ralph A. McGill is in charge of the program committee and the arrangements for the banquet meeting.

ANNUAL SPRING MEETING OF THE OKLAHOMA UNIVERSITY MEDICAL SCHOOL ASSOCIATION

April 23, 1942
Tulsa Club

PROGRAM

12:15 Honor Classes, 1912, 1922, 1932, 1942
Special Tables
Central Tables, Alumni and Guests

BUSINESS

12:45 Prefactory Remarks, Ray M. Balyeat
12:55 Secretary's Report, Wayne M. Hull
1:05 Committee Reports
Miscellaneous Business

ENTERTAINMENT

Honorary Toastmaster, Wm. F. Taylor, Emeritus Professor Pediatrics, Oklahoma University School of Medicine
1:15 Toastmaster's Remarks
Assisting Toastmaster, Ralph A. McGill
1:20 Echoes, Class of 1912, Pauline Barker
1:25 Echoes, Class of 1922, Marvin D. Henley
1:30 Echoes, Class of 1932, John H. Lamb
1:35 Echoes, Class of 1942, Mr. Allen Greer, President, Senior Class

ADDRESS

1:40 Wann Langston
1:55 Adjournment

Internists to Honor Dr. Herrmann

Members of the Oklahoma State Internists Association will be hosts at a dinner honoring Dr. George Herrmann, Galveston, Tex., Wednesday, April 22, at 5:30, at the Annual Meeting of the Oklahoma State Medical Association, in Tulsa. Doctor Herrmann is guest speaker for the Section on General Medicine.

The Internists Association met December 14 as guests of the Chickasha Hospital, Chickasha, with Dr. Turner Bynum in charge of the program. It is planned to make this meeting in Chickasha an annual event.

Federal Income Tax on Accounts Receivable

In The Journal of the American Medical Association, January 10, 1942, page 149, reference was made to the fact that under section 42 of the Internal Revenue Code, accounts outstanding on the books of a taxpayer may have theretofore been on a cash receipts and disbursements basis.

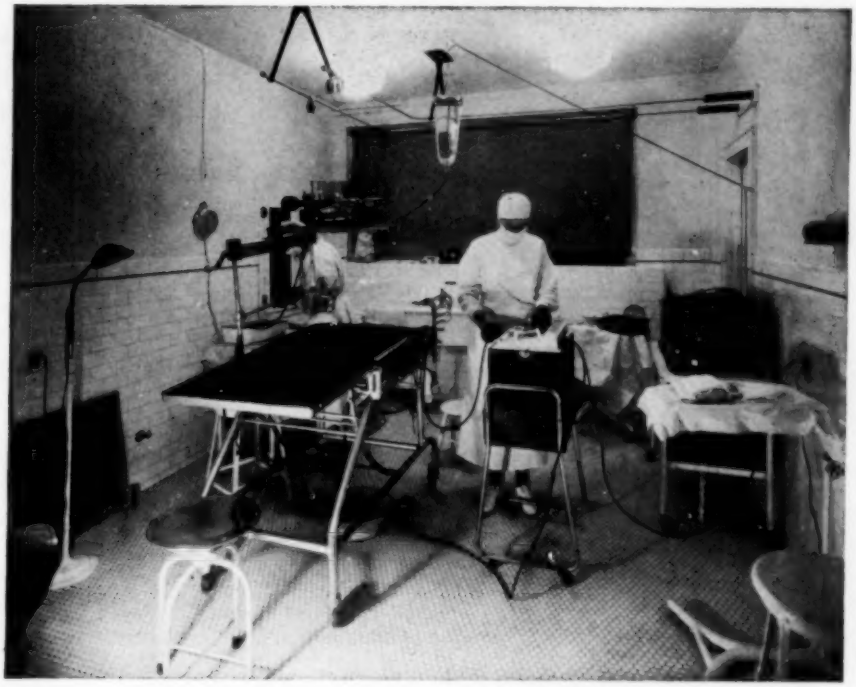
It was pointed out in The Journal that this method of computing income artificially builds up the income of the taxpayer for the year of death, subjecting it to higher surtax rates and in many instances imposing a considerable hardship on the estate of the taxpayer to raise necessary funds to pay the tax. Please refer to the statement in The Journal for a detailed discussion of this matter.

On March 3, representatives of the Treasury Department appeared before the House Committee on Ways and Means which is now holding hearings on the new tax law and submitted a number of recommendations for changes in the existing law. The Tax Advisor to the Secretary of the Treasury, Randolph Paul, submitted the following Treasury Department recommendation, among others:

> "Under present provisions income accrued to the date of the decendent's death must be included in the return for his last income tax period. The 'bunching up' of income that may occur under this provision can work a severe hardship, as the income of the decendent may in effect be artificially raised to a much higher surtax bracket. The Supreme Court has indicated that under this provision a lawyer's share of the fees from cases pending at his death is includible in the income tax return for the year in which his death occurs even though such fees may not be collectible until years later. The same result may follow with respect to the commissions of insurance agents, executors and trustees, and the fees of doctors and other professional men. To avoid this hardship, it is suggested that the present method of treating such income be eliminated in favor of a method that taxes the income to the persons who actually receive it. Thus, the income would be made taxable to the estate or to the heir or legatee as the case may be. It is also suggested that this change be made retroactive to all open years under proper safeguards insuring payment of the tax by the recipients of income in such years."

The House Committee on Ways and Means has as yet taken no action with respect to the foregoing recommendation of the Treasury Department. I send you this information so that you may know that there is in the offing a possibility of relief from the inequities created by the present method of arriving at the income of a taxpayer for the year of death.

Sincerely yours,
J. W. Holloway, Jr.,
Bureau of Legal Medicine and Legislation,
American Medical Association



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POLYCLINIC HOSPITAL

THIRTEENTH and ROBINSON **OKLAHOMA CITY**

MARVIN E. STOUT, M.D.
Owner

MEDICAL PREPAREDNESS

WAIVER OF PHYSICAL DEFECTS FOR LIMITED SERVICE OFFICERS

On January 30 the following communication was sent to surgeons in all corps areas and departments except the Philippine Department and to the commanding officers of all general hospitals except Sternberg General Hospital in Manila.

1. In order that the provisions of AG 210. 31 (12-19-41) RP-A, Jan. 7, 1942, subject: Waiving of physical defects for limited service officers of the supply arms and services may be carried out in a uniform manner, the following policies of this office concerning recommendations for waiver for limited service are announced:

(a) Considered acceptable for limited service:

(1) Overweight to 25 percent above average weight for age and height, and underweight to 15 percent below ideal weight, provided chest x-ray examination is negative for pulmonary pathologic change and other chronic disease is carefully excluded.

(2) Vision 20/400, in each eye corrected with glasses in possession of the examinee to 20/20 in one eye to at least 20/40 in the other, provided no organic disease of either eye exists.

(3) Blindness, or vision below 20/400, in one eye with vision 20/100 corrected with glasses in possession of the examinee to 20/20 in the other, provided there is no organic disease in the better eye and no history of cataract or other disease in the more defective eye which might be expected to involve the better one, and provided that, in case of ophthalmosteresis, the individual is fitted with a satisfactory prosthesis.

(4) Complete color blindness.

(5) Hearing 5/20 in each ear for low conversational voice, or complete deafness in one ear with hearing 10/20 or better in the other, provided the defect is not due to active inflammatory disease and is stationary in character.

(6) Chronic otitis media, inactive, with perforation of membrana tympani, provided there is a trustworthy history of freedom from activity for the preceding five years.

(7) Old fracture of the spine or pelvic bones which has healed without marked deformity, provided there is a trustworthy history of freedom from symptoms during the preceding two years.

(8) Loss of one hand, forearm, or lower extremity below junction of the middle and lower thirds of the thigh, provided the lost member is replaced with a satisfactory prosthesis.

(9) Pes planus, pes cavus, or talipes equinus, provided the condition is asymptomatic and does not interfere with normal locomotion.

(10) History of osteomyelitis following fracture, provided x-ray examination indicates complete healing and the condition has been asymptomatic for the preceding five years.

(11) Joints fixed or limited in motion, provided the condition is the result of injury and is nonsymptomatic.

(12) History of excision of torn or detached semilunar cartilage of knee joint, provided there is normal stability of the joint and a period of one year with complete freedom from symptoms has elapsed since the operation.

(13) Residuals of anterior poliomyelitis, without marked deformity or loss of function, originating two years or more prior to examination.

(14) Varicose veins, moderate, without edema or discoloration of skin.

(15) History of gastric or duodenal ulcer, provided there is a trustworthy history of freedom from activity during the preceding five years and provided a gastrointestinal roentgenogram at the time of examination is negative.

(16) Incomplete inguinal hernia.

(17) Small asymptomatic congenital umbilical hernia.

(18) Absence of one kidney, provided its removal has been necessitated by other than tuberculosis or malignancy and the other kidney is normal.

(b) Considered unacceptable for any service:

(1) History of malignant disease within preceding five years.

(2) Active tuberculosis of any organ and inactive pulmonary tuberculosis except as described in paragraph 2a.

(3) Syphilis, except adequately treated syphilis as described in paragraph 2b.

(4) Old fracture of the skull with bony defect greater than 2 cm. in longest diameter or with history of accompanying mental or neurologic complications.

(5) Instability of any of the major joints.

(6) History of metastatic osteomyelitis with prolonged or recurrent drainage, regardless of duration.

(7) Arthritis of the atrophic (rheumatoid) type.

(8) Any cardiovascular condition which disqualifies for general military service.

(9) History of gastroenterostomy, gastric resection, or intestinal anastomosis or operation for intestinal obstruction.

PROCUREMENT AND ASSIGNMENT SERVICE FOR PHYSICIANS, DENTISTS AND VETERINARIANS

Information from Major Sam F. Seeley, Executive Officer of the Procurement and Assignment Service for Physicians, Dentists and Veterinarians, 601 Pennsylvania Avenue, Washington D. C., states that a request has just been received by that office from the Army Air Force for two thousand five hundred physicians to be commissioned by July 1 and for six hundred physicians to be commissioned each month thereafter for the period of 1942. The total is six thousand one hundred physicians needed this year to provide adequate medical care for the Air Force. The place of the Air Force in the winning of the War is already apparent to every one.

QUALIFICATIONS

Eighty percent of the physicians to be commissioned must be under 37 years of age. The remaining 20 percent may be between the ages of 37 and 45 years. Those in the older age group must be qualified by certification as specialists preferably in the fields of surgery, ophthalmology and neuropsychiatry.

The letter of application should state the age of the applicant and the school of graduation and should indicate that he believes himself qualified physically and professionally for a commission.

All names are cleared through the Procurement and Assignment Service.

The letter, requesting application forms, should be sent to the Air Surgeon, Army Air Force, Washington, D. C.

(10) History of prostatectomy or transurethral resection of the prostate, or of prostatic hypertrophy of any degree.

(11) Chronic endocrine disease except mild hypothyroidism or mild Froehlich's syndrome.

(12) Diabetes mellitus of any degree or renal glycosuria.

(13) History of any psychosis.

(14) History of severe psychoneurosis at any time, or psychoneurosis of any degree if it has been recurrent or has shown symptoms within the preceding five years.

2. The following may be recommended for general military service with waiver:

(a) Individuals with minimal inactive lesions of primary or reinfection type pulmonary tuberculosis. These lesions may consist of:

(1) Calcified residues of lesions of the intrathoracic lymph nodes, provided none of these exceed an arbitrary limit of 1.5 cm. in diameter and the total number does not exceed five.

(2) Calcified lesions of the pulmonary parenchyma, provided the total number does not exceed ten, one of which may equal but not exceed 1 cm. in diameter, but none of the remainder may exceed 0.5 cm. in diameter.

(Note—The lesions described in (1) and (2) should appear sharply circumscribed, homogeneous and dense. Measurements refer to standard 14 by 17 inch direct project roentgenograms.)

(3) Small fibrotic parenchymal lesions represented in the roentgenogram as sharply demarcated strandlike or well defined small nodular shadows not exceeding a total area of 5 sq. cm., provided acceptance is deferred until subsequent examination demonstrates that the lesions are stationary and are not likely to be reactivated. The minimum period of time to determine this is six months. It must be recognized that either progression or regression of the lesions indicates activity.

(b) Individuals with confirmed positive serologic tests for syphilis with no clinical evidence of the disease, with convincing histories of a trustworthy diagnosis of syphilis, or with reliable histories of treatment for the disease on serologic or clinical grounds; provided:

(1) That a negative spinal fluid since infection and treatment has been reported from a trustworthy source;

(2) That, in infections estimated to be of less than four years' duration, at least 30 to 40 arsenical and 40 to 60 insoluble bismuth injections or their equivalent, with a minimum total of 75 injections, have been given, with approximate continuity (no rest periods or lapses) during the first 30 weeks of treatment; and

(3) That, except as further qualified, in infections estimated to be over four years' duration, at least 20 arsenical injections and 40 to 60 insoluble bismuth injections or their equivalent, with a minimum total of 60 injections, have been given in alternating courses; rest periods between consecutive courses not exceeding eight weeks being allowable.

In infections of unknown duration, it shall be presumed for classification purposes that those of individuals under 26 years of age are of less than four years' duration, and over 26 years, of more than four years' duration.

(Note—For the determination of treatment, the signed statement of acceptable treatment sources administering it, with total number of doses of each drug and approximate calendar dates of administration and available laboratory and clinical data, shall be required as evidence).

(c) Overweight to 20 percent above average weight for age and height, and underweight to 12.5 percent below ideal weight, provided a chest roentgenogram is negative for pulmonary pathologic changes and other chronic disease is carefully excluded.

(d) Insufficient incisor or masticating teeth, provided the mouth is free from extensive infectious processes and the examinee is wearing satisfactory dentures.

(e) Pilonidal cyst or sinus, provided there is no palpable tumor mass, no evidence of purulent or serous discharge, and no history of previous discharge or inflammation.

(f) History of healed fracture with bone plates, screws or wires used for fixation of fragments still in situ, provided x-ray examination shows no evidence of osteomyelitis and no rarefaction of bone contiguous to the fixative materials; that such fixative materials are not so located that they will be subjected to pressure from military clothing or equipment, and that one year has elapsed since their application.

(g) History of operation or of injection treatment for inguinal or small ventral hernia, provided examination three months or more following operation, or following the last injection, shows a satisfactory result.

(h) History of unilateral renal calculus, provided the condition has been asymptomatic for the preceding three years, urine examination is negative, and roentgenologic examination (flat plate) of both kidneys is negative.

(i) Absence of the spleen, provided its removal has been necessitated by a crushing injury.

(j) History of cholecystectomy, provided the condition has been asymptomatic for the preceding two years.

3. The action of the reviewing medical authority should indicate on the Report of Physical Examination, W. D., A. G. O. Form No. 63, that cognizance has been taken of any defects which do not meet the standards set forth in AR 40-105, but for which waiver is recommended by a notation as follows:

"Recommend acceptance for general military service with waiver of (here record the defect or defects)," or

"Recommend acceptance for limited service only with waiver of (here record the defect or defects)."

By order of the Surgeon General:

John A. Rogers,
Lieutenant Colonel, Medical Corps,
Executive Officer.

American Board Obstetrics. Gynecology Examination Dates Set

The general oral and pathological examinations (Part II) for all candidates (Group A and B) will be conducted at Atlantic City, N. J., by the entire Board from Thursday, June 4, through Tuesday, June 9, 1942, prior to the opening of the annual meeting of the American Medical Association.

Group A, Part II, candidates will be scheduled for examination the first part of the examination period, and Group B, Part II, the latter half. Formal notice of the time and place of these examinations will be sent each candidate several weeks in advance of the examination dates.

Candidates for *reexamination* in Part II must make written application to the Secretary's Office before April 15, 1942.

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OK 4-42

NEWS FROM THE COUNTY SOCIETIES

Members of the Creek County society met March 10 in Sapulpa to hear a program presented by guest speakers, Dr. James Stevenson and Dr. John Edwards of Tulsa, and Fletcher Johnson, attorney from Bristow.

Dr. L. C. Northrup, Ponca City, presented a two-hour moving picture and talk on Colombia and Ecuador for members of the Kay County Medical society, March 19, in Ponca City.

Members of the society have begun plans for the District Meeting in May.

A discussion of the new Postgraduate teaching course in Internal Medicine was given by L. W. Kibler, Oklahoma City, for members of the Ottawa County society at a meeting in Miami, March 19.

Dr. Clarence W. Erickson of Pittsburgh addressed the meeting on "Early Heart Failure." About 18 members of the society were present.

To honor the President of the Associatin, Dr. Finis W. Ewing, and two pioneer physicians of LeFlore county, members of the LeFlore county society met March 12 in Poteau for dinner and a scientific program. The pioneer physicians honored were Dr. E. L. Collins, Panama, and Dr. S. C. Dean, Howe. Gifts were presented to these doctors and to Dr. W. L. Shippey, who recently moved to Fort Smith, Ark.

Doctor Ewing discussed "Medical Preparedness." Dr. Shade D. Neely of Muskogee discussed "Syphilis," and Dr. L. S. McAlister, Muskogee, discussed "Malignancy." Other guests were Dr. L. C. Kuyrkendall of McAlester who discussed the work of the Council of the Association, and Dr. William H. Kaeiser, of McAlester.

The Custer County society and the Southwestern Oklahoma Medical Association met together, March 18, in Clinton, to hear three speakers present a scientific program.

Dr. Wann Langston, Oklahoma City, talked on "Circulatory Emergencies." Dr. J. William Finch of Hobart discussed "Nausea and Vomiting Following Administration of Stilbesterol," and Dr. Paul B. Lingenfelter of Clinton spoke on "Foreign Bodies of Lung and Trachea."

About 16 members of the Seminole County society met February 24, in Wewoka to hear Dr. Eugene Gillis of the State Health Department discuss "Syphilis." Doctor Gillis illustrated his talk with a motion picture.

"Phlebitis" was the topic for discussion at the meeting, March 10, of the society.

Dr. F. Redding Hood spoke on "Treatment of the Decompensated Heart" at the meeting of the Oklahoma county society, March 24, in Oklahoma City. Discussion of the paper was given by Dr. L. H. Charney and Dr. George H. Garrison, both of Oklahoma City.

The regular monthly meeting of the Cherokee County society was held on Tuesday, March 10, following a dinner at the W. W. Hastings hospital in Tahlequah.

The program, symposium on gynecological endocrinology, was presented by the following speakers: Dr. L. H. Bally, Professor of Biology, Northeastern State college, who spoke on "The Physiology of the Pituitary Gland," and Dr. Isadore Dyer, Tahlequah, who spoke on "The Definition and Role of the Female Sex Hormone in Treatment of Gynecological Conditions."

Members of the Beckham county society are making plans for a joint meeting of the physicians, dentists and lawyers of the county for the near future.

At the meeting of the society, April 14, in Sayre, Dr. P. J. Devanney read a paper on "Shock," and Dr. Hugh H. Shannon discussed his work out of the State Health department.

A motion picture on "Syphilis" was shown to members at the meeting, March 3, in Elk City.

"Certain Medical-Legal Problems in the Treatment of Fractures" was the topic of the talk given by Dr. D. H. O'Donoghue of Oklahoma City before members of the Muskogee county society, March 2, in Muskogee. Doctor O'Donoghue used x-ray films to illustrate his talk.

Others on the program were Dr. H. L. Word, Muskogee, who reviewed "Recent Advances in Treatment of Burns;" Dr. I. B. Oldham, Jr., Muskogee, who discussed "Lymphatic Leukemia," and Dr. Marvin Elkins of Muskogee, who talked on "Emergency Surgery."

A case of Sarcoma of the Cord was discussed by members of the Carter county society at the meeting, March 20, in the Hardy sanitarium in Ardmore. The meeting followed a dinner served by Mrs. Hardy to the staff of the sanitarium and members of the society. Other discussions centered on the part of medicine in the present emergency.

Another county society to see the motion picture and hear the talk given by Dr. Eugene Gillis on "Shypilis" is the Garvin county society. Members saw the picture at their March meeting in Pauls Valley.

At this meeting, the society also joined in agreement with the U. S. F. S. A. for the care of members under the F. S. A. by members and other regularly licensed physicians of the county.

The program of the Craig County society's meeting, March 10, centered on the examination of draftees. Following this, members heard Dr. L. W. Hunt, speaker for the Postgraduate course in Internal Medicine, discuss "Arthritis," and clinics on the subject were presented.

On March 17, members met to hear Doctor Hunt's lecture on "Gastro-Intestinal Diseases."

Dr. John W. Martin, Cushing, read a paper on "Gastric Disorders" at the meeting of the Payne County society, March 10, in Stillwater, and Dr. A. B. Smith and Dr. L. A. Mitchell presented ten-minute discussions of the paper. About 17 members of the society were in attendance.

Dr. E. Goldfain, Dr. Charles R. Rountree, and R. H. Graham, all of Oklahoma City, were guest speakers at the meeting of the Alfalfa County Medical society, March 31, in Alva.

The program followed a dinner for the doctors, their wives, and guests, and a short business session. Doctor Goldfain spoke on "Neuritis, Arthritis, and Rheumatism, Diagnosis and Treatment," and Doctor Rountree discussed "Arthritis and Neuritis From an Orthopedic Standpoint." Mr. Graham then spoke on "Procurement and Assignment."

Auxiliary News

A few more months and the members of the Women's Auxiliary of the American Medical Association will be arriving in Atlantic City, New Jersey, for their Annual Convention, June 8-12.

Have you made your reservations? If not, send your request *at once* to Haddon Hall, Atlantic City, New Jersey.

On March 3, 1942, the Pittsburg auxiliary met at the Hotel Crutcher in McAlester for a meeting and luncheon. Mrs. E. H. Shuller was in charge of the meeting, due to the absence of Mrs. Pemberton, on account of serious illness. Twelve of the 15 members were present. Last year this group adopted a British child, however, they decided not to adopt a child this year but to redouble their Red Cross production. Other projects include the furnishing of cod liver oil and completion of 32 scrap books for tuberculosis children at Talihina.

The Tulsa Auxiliary met at the Chamber of Commerce Building in Tulsa on Monday, March 2. This meeting was in the form of a Health Forum, which was open to the public. Questions on health were asked from the floor and answered by the following doctors: Dr. Ralph McGill, Dr. D. L. Garrett, Dr. George Osborn, Dr. Maurice Searle and Dr. Margaret Hudson. Exhibits of Hygeia and other health charts were on display.

The Oklahoma County auxiliary met on February 25 at the Y.W.C.A. in Oklahoma City. The Scrap Book Committee, under the guidance of Mrs. Tom L. Wainwright, has completed 30 books. These have been given to the Crippled Children's hospital. Mrs. Walker Mordledge, as chairman of the Social Service committee, reports completion of 12 layettes. The layettes are donated to four hospitals of the City. Mrs. Wm. K. Ishmael, Chairman of the Calling committee, has completed a list of the doctors' wives who are graduate nurses or who have nurses' training. This information has been turned to the Red Cross and the O.C.D. Bureau. The Oklahoma County auxiliary is under the guidance of Mrs. Neil Woodward and has a membership of 140. Along with Mrs. Woodward's medical auxiliary work, she is a First Aid instructor for the Red Cross and has started a class which is composed of doctors' wives.

March 5, 1942, Capping exercises were held in the auditorium of the School of Medicine building for 25 student nurses who completed their probational training.

Miss Gladys Hall, Educational Director of the American Dietetic Association inspected the school for the training of student dietitians, Thursday, March 5.

Dr. Helen S. Mitchell, Chief Nutritionist of the Defense Health and Welfare Service, Federal Security Agency, talked to dietitian students, nurses, and students and members of the faculty of the University of Oklahoma School of Medicine, on Friday, March 6, 1942.

At 4:00 P. M. on Friday, March 13, 1942, Dr. Finis Ewing, President of the State Medical Association, gave a lecture to junior and senior students on "The Future of Medicine in America," in the auditorium of the School of Medicine building.

At 8:00 P.M. on Friday, March 13, 1942, Dr. C. W. Mayo of the Mayo Clinic, Rochester, Minn., gave the third annual LeRoy Long Memorial Lecture. He spoke on the subject: "Principles of Surgery of the Colon." The talk was illustrated by means of colored pictures.

Pause at the familiar red cooler for ice-cold Coca-Cola. Its life, sparkle and delicious taste will give you the real meaning of *refreshment.*

News From The State Health Department

A better organized, more effective venereal disease control program is expected for the state health department, now that a Works Project administration assistance organization is working.

Under the assistance program, a central registry for venereal disease cases and contacts has been located at the state health department. It will serve as a clearing house for all agencies treating or investigating venereal disease cases or suspected cases.

The objectives of the program are: to improve case finding, particularly among contacts who infect men in the armed forces, defense industrial workers and selectees; to work for more complete venereal disease morbidity reporting by the private physicians, and to evaluate the different techniques in venereal disease case finding.

In addition the project provides for an emphasized health education program on venereal disease, intended to give the public authentic information on the dangers of syphilis and gonorrhea and the importance of early treatment.

Clinic, nursing and laboratory assistance is also offered under the plan. Dr. E. A. Gillis, director of venereal disease control for the State Health department, Neill Sanborn, WPA supervisor of the project, and J. F. Donohue, public health service statistician, are responsible for direction of the program.

Group Hospital Service News

BLUE CROSS NEWS

In all American History there has never been a movement that has enlisted the popular support that has been given to the "Blue Cross Plans" for hospital care. From slightly over one-half million subscribers on January 1, 1937, enrollment has grown to 8,465,000 subscribers on January 1, 1942. Comparison has been made with gains in the armed forces of the Nation, and it has been found that the total induction in army, navy and marines is less than the "Blue Cross" figure. Without compulsion, appealing purely on the basis on their non-profit protection and gaining greatly from word-of-mouth publicity, which was prompted by the excellence of service rendered in the hospitals of America, the plans have accelerated their rate of growth to its highest peak. More than 1,000,000 people voluntarily enrolled in the last three months of 1941.

The proportion of persons hospitalized through "Blue Cross Plans" during the month of December increased only slightly over the previous month, which was the low point of the year. Nevertheless, approximately 62,000 subscribers were admitted to hospitals during December, and the total for the year reached 750,000 hospital patients who had the foresight to enroll in the non-profit hospital service plans.

The speed with which Americans are embracing this National Health Agency makes every million mark a milestone. An even great significance attaches to this huge volume of enrollment when the health values of the movement are realized. The enrollment of eight and one-half million persons means that in 1942 at least one million persons will be hospitalized without fear of hospital bills, and in the language of large numbers, one thousand gross of babies will be delivered in hospitals prepaid.

• OBITUARIES •

Dr. A. M. Young, Jr.
1886-1942

Another one of our older members of the medical profession in Oklahoma City passed away on March 18, 1942, at Kerrville, Tex., where he had gone to the Soldier's Hospital for treatment some two months ago.

Andrew Merriman Young, II, was born in Nashville, Tenn., on August 16, 1886. He received his preliminary education at the Battleground Academy at Franklin, Tenn., and then graduated from the Medical Department of Vanderbilt University, Nashville.

He came to Oklahoma City and was associated with the late Dr. Millington Smith, where he enjoyed a general practice. In 1924, however, he decided to become a genito-urinary specialist, so took a post-graduate course at Tulane University, New Olreans, La. He then became associated with the late Dr. W. J. Wallace in urology, later moving to an office by himself. From 1912-1917 he was a surgeon for the Frisco Railroad in Oklahoma City.

He entered the United States Army Medical corps in 1917 as a first lieutenant, and served over seas with the 36th Division, and later served as surgeon for the 131st Machine Gun Battalion. In 1918 he was promoted to the rank of Captain, in the medical corps, and saw service in Champaign and Meusse-Argonne sectors. He was discharged from Camp Dix in 1919.

At one time Dr. Young served as Assistant Surgeon in the United States Public Health Service and was a former director of the state venereal disease bureau.

He was a member of the Alpha Tau Omega social fraternity, and the Alpha Kappa Kappa medical fraternity. He belonged to our County and State Medical Societies, the American Medical Association, and was a former member of the Civitan Club.

He married Miss Morree Oswald of Nashville, Tenn., on May 6, 1912, and to this union four children were born. Dr. A. M. Young, III, has continued in his father's office, and also carries on a general practice. Millington Young is now a student in the University of Oklahoma School of Medicine. His wife, two daughters, Margaret Ann and Rose Marie, and three brothers survive.

Dr. Young had been in ill heath for some time and was forced to give up his practice and retire to his home in November, 1938. He recently went to the Soldier's Hospital at Kerrville, Tex., where he remained until his demise on March 18, 1942.—Lea A. Riley.

Dr. Thomas R. Lutner
1886-1942

Dr. Thomas R. Lutner, a practicing physician in Comanche county since 1919, died of a heart ailment, March 7, in an Oklahoma City hospital.

Recognized as one of the leading physicians of Lawton, Doctor Lutner had recently been elected Secretary of the Comanche County Medical society for 1942. He had been active in county and state medical organizations since May of 1919, when he moved to Lawton from Cameron, Tex. Doctor Lutner was an eye, ear, nose and throat specialist.

Graduated from Texas university, the Dr. John Sealy school of Galveston and Chicago university, Doctor Lutner began his practice in Cameron. When he moved to Lawton, he married Miss Sallie Draughn of Lawton.

He was active, also, in the Baptist church, the Masonic lodge and the Kiwanis club.

Survivors include his wife and a daughter, Lurleen, of the home address; a son, Thomas, a student at Kemper Military academy; and a daughter, Kathleen, a student at Baylor university, Waco, Tex.

Dr. George R. Norman
1885-1942

Dr. George Robert Norman, 56, for many years active in Tulsa county medical affairs died January 21 after a brief illness. Funeral services for the veteran eye, ear, nose and throat specialist were held at Memorial Christian church.

A resident of Tulsa for 16 years, Doctor Norman was a graduate of the University of Alabama medical school at Tuscaloosa. During the last World War, he served in the United States Army Medical Corps, and was a member of the Joe Carson post of the American Legion.

Resolution

WHEREAS, George Robert Norman has for the past sixteen years labored in Tulsa and vicinity as an active and interested member of the Tulsa County Medical Society, and

WHEREAS, during all this period he has practiced the healing art in a manner to reflect credit both upon himself and his profession, and

WHEREAS, he served with honor in the Medical Department of the armed forces of the United States in the World War I; was later identified with the Joe Carson Post of the American Legion, and a valued member of the Petroleum Lodge of the Masonic order, and

WHEREAS, the said George Robert Norman has been called to his reward by the Great Physician, and, in order that the Tulsa County Medical Society may appropriately record his useful career among us,

NOW, THEREFORE, BE IT RESOLVED by the Tulsa County Medical Society, in regular meeting assembled this 26th day of January, 1942, that the absence of Dr. Norman from our ranks will be keenly felt by us and the various organizations, of which he was an active and faithful member.

BE IT FURTHER RESOLVED that the Tulsa County Medical Society, by this means expresses its sympathy to the family of the deceased and our appreciation of his worth to his confreres in both City and State.

BE IT FURTHER RESOLVED that a copy of this Resolution be spread upon the minutes of our Society and that copy of same be transmitted by our Secretary to the bereaved family.

Roy Dunlap, M.D., Chairman,
R. G. Ray, M.D.,
S. C. Venable, M.D.,
Committee.

Dr. G. D. Funk
1905-1942

Dr. Gustavus D. Funk, El Reno physicim, serving as a captain in the Medical Corps of the U. S. Army, died unexpectedly from a heart attack about 8:15 A.M. February 26, at his home in El Reno, 414 South Williams Avenue.

Arriving home Tuesday to spend a brief leave here he suffered a heart attack about 7:30 A.M. and died less than half an hour later.

Doctor Funk came to El Reno as a boy three years of age from Maryville, Mo. He was born there on May 8, 1905. He attended school here and was a star basketball player and captain on the El Reno High School teams. Following his graduation in 1923 he attended Washington and Lee at Lexington, Va., for two years and then completed his course at the University of Oklahoma, Norman.

Following his graduation he was united in marriage to Miss Rose Aderhold, daughter of Dr. T. M. Aderhold of El Reno. After two years Dr. Funk decided to change from a business career and enter the medical profession. He accordingly returned to the University of Oklahoma and in 1933 received his M.D. degree.

Doctor Funk practiced medicine in El Reno from the time of his graduation from the University of Oklahoma school of medicine in 1933, until he was called to the Army in October, 1940. Commissioned as a lieutenant when called to active duty, he later was made a captain and at the time of his death, was serving at Lubbock, Tex. He was also owner and manager of the El Reno Sanitarium. He was a member of Phi Gamma Delta social fraternity at Norman, and the Elks lodge and Rotary club in El Reno.

Survivors include his wife, his daughter, Jean, both of the home address; his mother, Mrs. John L. Funk, of El Reno; and a brother, William L. Funk, County Attorney, of El Reno.

Dr. Daniel B. Stough
1861-1942

Dr. Daniel B. Stough, pioneer physician of Vinita and Craig county, died at his home in Vinita, March 19, after an illness of several months.

Doctor Stough came to Vinita in 1907, and established a practice. He becamo prominent in medical circles, and held the position of county physician for years. He was a graduate of the Kentucky School of Medicine, Louisville, Ky.

Besides his activities in connection with his profession, Doctor Stough was active in the First Methodist church and the Masonic lodge.

He is survived by two daughters, Mrs. L. R. Herndon, Seminole, and Mrs. B. K. Chowning, Okemah; two sons, Dr. Daniel B. Stough, Jr., Hot Springs, Ark., and Tommie E. Stough, Baltimore Md.; and three grandchildren and one great-grandchild.

J. E. Hanger, Inc. Are New Advertisers

This issue of the Journal carries the first advertisement of J. E. Hanger, Inc., of St. Louis, Mo., manufacturers of artificial limbs.

The Oklahoma City office of J. E. Hanger, Inc. is located at 612 N. Hudson, and Mr. L. T. Lewis serves the company as Oklahoma City representative.

When more
Vitamin B_1
is needed
in the normal
everyday diet--

Better Kraut
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The Delicious WHITE Bread

BOOK REVIEWS

"The chief glory of every people arises from its authors."—Dr. Samuel Johnson.

"FUNCTIONAL PATHOLOGY." Leopold Lichtwitz, M.D., Chief of the Medical Division of the Montefiore Hospital, Clinical Professor of Medicine, Columbia University, New York. 567 Pages. Grune and Stratton, New York City, 1941.

"Functional Pathology is the science which analyzes the mechanism of symptoms and disease. It can also be defined as the science of pathological manifestations during life." Hence this book takes up the age old argument about the relationship between cellular and functional pathology. The more we study the relationship between "mind" and "matter," and accept the evident liason between them, the more we will be able to accept the contents of this book for its "creative thought." Certainly the hypothalmus and pituitary cannot always verify at autopsy what was diagnosed by clinical symptoms. Example: "hypoprotamaenia and edema (hypothalmic edema) possibly also hypercholestrolemia and albumunuria point to the hypothalmus as the area of origin of the nephritic syndrome. There is of course no anatomic proof."

The hypothalmus does not make any protest to the incrimination. Its title may just as properly be called the Physiology of the Hypothalmus*, due to the pontifical position he gives that organ, as the regulator and correlator of the various organs as subject to the autonomic nervous system, which causes automatic changes in the blood supply, secretion, muscular tone, and bodily functions, either in a normal or pathological manner. He especially notes the "urinary system which consists of the renal parenchyma proper, and the vascular supply and the nerve connections from the hypothalmus down to the last nerve ending." In addition, a number of endocrine glands act on the widespread components of this system. By cooperation of the circulatory nervous and endocrine elements, with the renal parenchyma of the activity of the system is automatically integrated with that of the entire organism. One of the most interesting 40 pages is taken up with the mechanisms of kidney secretion in the normal and pathological kidneys. It shows he has put much time on this phase of medicine, and giving a very rational explanation to various points. These he tries to interpret, by bedside and laboratory methods as a clinical observer, both on the Continent and in this country. His most impressionable years were in Europe, when interest in the hypothalmus was beginning to manifest itself as a physiological entity in relation to the autonomic nervous system and endocrine glands. Even at this date, many mooted points are still under discussion, and you may not always agree with his deductions, but ever thus it has been since Claude Benard made the first piqure and made a diabetic response which he styled "internal environment."

"The anatomical relationship between hypothalmus and pituitary gland, as evidenced by their embryonic development, their spatial intimacy, and their numerous connecting nervous pathways and vascular channels, is paralleled by functional cooperation." Heat production or control, sweating, are all controlled by this hypothalmic-pituitary action on the autonomic nerves. Basal metabolism rate is altered by hypothalmic lesions. Body water is controlled by insulin, thyroxin, pitressin, hyperpathyroidism. The denervated muscle loses water and is unable to absorb it. Hence, nervous hormonal and ionial influences are responsible for the quantity of, and degrees of water fixation.

A disorder of the hypothalmic pituitary system produces Diabetes Insipidus. This same system disturbs sugar metabolism, as shown in acromegaly, hypersensitivity to insulin, after diminished function of the pituitary gland. Many now think Diabetes is an adrenal, thyroid, pituitary, liver and pancreatic maladjustment, and not that of the Iletin glands alone. These doubters have plenty of argument for their dissension to the view generally held. Posterior pituitary gland substance, or pitressin in oil, as insulin in protamine zinc solution, acts specifically on their respective troubles, but are alike diminished in specificness by emotional states.

Lesions in the hypothalmic area render the responses to the thyroid, either in an extreme sensitiveness (as in the migraine patient) to an extreme tolerance. The adrenal glands also aggrevate all thyroid symptoms. The thyroid gland is discussed in a very full text. Especial attention to the relationship of carbohydrate metabolism is given.

The novel explanations of these many clinical phenomena, with the vast amount of bibliography(mostly French and German), in its 567 pages, makes it a very interesting book to study, and gives you plenty of food for thought and invokes discussion. It Oslerizes in point of brevity the therapeutic advice, but philosophizes in a Baconian manner on the Why of symptoms and pathology. Dr. Alexis Carrel, in one of his books, sharply criticizes modern physiological investigation for far too closely confining itself to the body, merely as a machine without any adequate consideration of the driving force that animated the machine.—Lea A. Riely.

*(In 1940 a symposium on the anatomy, physiology and clinical significance of the hypothalmus included 42 investigators and the published Proceedings, containing 34 chapters, runs to 971 pages, and includes a bibliography of more than one thousand titles.)

"SYNOPSIS OF GENITOURINARY DISEASES." Austin I. Dodson, M.D., F.A.C.S., Richmond, Va. Third Edition, C. V. Mosby and Co., St. Louis.

As the author indicates in a foreword, this book is designed for medical students and as a quick reference book for the general practitioner, making no claim for technical or operative procedures. Chapters are devoted to:

Methods of diagnosis; Instruments and minor urologic procedures; Anomalies; Nontuberculous infections of the urinary tract; Urethral infections; Infections of the male genital tract and disturbances of function; Tuberculosis; Injuries; Calculous disease; Hydronephrosis; Prostatic obstruction; Neurogenic dysfunction of the bladder; Pathology in the scrotum; Tumors.

In such a limited space naturally no detailed instructions can be given, but the proportions devoted to each subject are well balanced, especially from the standpoint of practicability and general usage. Almost all conditions are mentioned and the most common are taken up in greater length. Indications for advanced urological study are given as are those for surgery without attempting to describe the procedure. The illustrations and diagrams are well chosen and helpful, not being too complicated or detailed.

The chapter on nontuberculous infections is good and is up to date. Dietary treatments are mentioned and charts given, but such subjects require more space to be properly presented. Medical management and choice of drugs in different infections is well covered. Tuberculosis and calculous disease are covered and the management of each is adequately presented.

On the whole the book is well adapted to the purpose for which is was designed. Medical students and interns may find much of value here and the general practitioner as well will find it useful to freshen his approach to genitourinary problems.—Jim M. Taylor.

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REVIEWS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

"CORTICAL EXTRACT IN THE TREATMENT OF SHOCK." Loring S. Helfrich, M.D., William H. Cassels, M.D., and Warren H. Cole, M.D.: The American Journal of Surgery, February 1942. Vol. LV, No. 2. Page 410.

In an effort to determine the efficacy of cortical extract in the prophylaxis and the treatment of shock, the extract was given to animals subjected to shocking procedures and to human beings having major operations of a magnitude apt to produce shock. In animals, shock was produced by hemorrhage and by massage of the intestine with the animal under ether anesthesia. In experimental shock produced by hemorrhage cortical extract exerted a definite but slight tendency to decrease the severity of shock, particularly when the extract was given with fluids (glucose and electrolytes). Fluids alone, i.e., without cortical extract, did not significantly prevent the fall in blood pressure although the actual survival time following hemorrhage was increased.

When cortical extract was given an hour or two before institution of intestinal massage (to produce shock), the average drop in systolic blood pressure after 40 minutes of massage was only 19.5 mm., contracted with 35.3 mm. in animals not receiving extract prophylactically. Moreover, when hemorrhage of a constant rate was instituted 90 minutes after intestinal massage was begun, there was a survival time of 36 and five-tenths minutes in animals receiving cortical extract, contrasted with a survival time of only 21 minutes in animals not receiving cortical extract. When glucose and electrolytes were given in addition to extract, the effect was still more prominent, there being no drop in blood pressure after 40 minutes of massage and an average of only 7.5 mm. after 55 minutes of massage. In other words, the beneficial effect of cortical extract and fluids (glucose and electrolytes) in prevention of shock was comparable to that which might be expected from plasma. When extract was given after shock had already been produced in animals very little beneficial effect could be demonstrated; there was little or no rise in blood pressure although further drop was slightly delayed.

Falling drop determinations showed an increase in specific gravity of blood in shock, and a decrease after hemorrhage as reported by others. Cortical extract showed a definite but slight tendency to counteract the increase in specific gravity produced by shock.

In human beings the use of cortical extract in the presence of shock was limited to a few cases due to the relative infrequency of shock, but in every instance the effect appeared to be beneficial.

In order to determine whether or not cortical extract would exert a favorable influence in prevention of shock, the average pulse rate and blood pressure was computed in a series of 15 patients receiving cortical extract prophylactically, and upon whom major operations of unusual duration and severity were performed. From the hospital records an equal number of operations (in which no cortical extract was given), with equal number of types and duration, were obtained and the average pulse rate and blood pressure likewise determined. In the patients receiving cortical extract prophylactically, the pulse rate averaged eight beats per minute slower, and the systolic blood pressure 12 mm. higher than in the patients not receiving extract. This suggests that the cortical extract tends to minimize the changes which might be interpreted as being changes preliminary to the development of shock.

Observations on animals as well as patients showed that the extract was much more effective when given prophylactically, than when given after shock was already produced.—LeRoy D. Long.

"PERITONITIS — STUDIES IN PERITONEAL PROTECTION WITH PARTICULAR REFERENCE TO ACTION OF SULFONAMIDE DRUGS IN EXPERIMENTAL PERITONITIS." H. D. Harvey, M.D., F. L. Meleney, M.D., and J. W. R. Rennie, M.D., New York, N. Y.: Surgery, February 1942. Vol. 11, No. 2. Page 244.

Acute gangrenous perforated appendicitis was produced in dogs, which resulted apparently uniformly in generalized peritonitis.

Eighty-seven and one-half percent of the untreated controls died of peritonitis.

Preoperative peritoneal protection afforded by bactragen, E. coli vaccine or E. coli bacteriophage did not lower the mortality or significantly prolong life.

Sulfathiazole placed in the peritoneal cavity in the vicinity of the appendix was of little apparent benefit; sulfanilamide similarly used seemed to have some value in lowering the mortality and in prolonging life.

Enteral administration of sulfapyridine, sulfathiazole and, less definitely, of sulfanilamide, was followed by a striking lowering of mortality. In the case of sulfathiazole, the mortality fell to 8.3 percent, compared to 87.5 percent for the controls. The mortality with sulfapyridine was 37.5 percent, with sulfanilamide 50 percent.

The peritonitis in each case cultured was found to be due to a mixture of organisms, among which the varieties commonly found in human peritonitis were predominant; that is, E. coli, enterococci, Cl. welchii.

The authors, in experiments with mice and guinea pigs, attempted to render the peritoneal cavity immune to infection by the organisms that commonly cause peritonitis in man. They found that several substances injected intraperitoneally 24 hours before the organisms would afford limited immunity. They then took what seemed to be the best of these substances and compared their effect upon peritonitis in dogs with the effect of some of the sulfonamide drugs. The lesion produced in the dogs resembled that encountered in human beings, in that it was a peritonitis caused by a mixed growth of intestinal organisms emanating from a focus of gangrenous cecal appendage. It seems significant that preoperative immunization of the peritoneum had little effect upon this type of lesion. The authors say that they cannot express the degree of effectiveness of the sulfonamides in terms of minimal lethal doses but that they believe their experiments justify further trial as preventive and curative agents for peritonitis in man. They fail to demonstrate any advantage in intraperitoneal use of the crystals of these drugs, as opposed to administration by other routes. They, however, make the statement that in their opinion these experiments should not be taken literally and that the problems of route of administration and even of the type of sulfonamide drug should be solved clinically.

They believe that their experiments have shown that there is strong evidence that the sulfonamide drugs,

properly selected and administered, will be of use in lowering the death rate from peritonitis. They also think their experiments show that there was slight evidence of benefit from preoperative injection of substances into the peritoneal cavity in the effort to produce peritoneal immunity, but that the benefit was slight and definitely less than that afforded by the sulfonamide drugs. It appeared that there is no benefit to be derived from preoperative injections that cannot be better obtained from the sulfonamides.

Their conclusions were as follows:

"1. Various substances injected into the peritoneal cavity of mice or guinea pigs will produce an immunity to peritonitis caused by subsequent intraperitoneal injection of intestinal organisms.

2. The immunity appears to be nonspecific in nature.

3. The degree of immunity against organisms as obtained from the intestinal tract or from pus in the peritoneal cavity is usually of the order of ten minimal lethal doses. Only against strains of E. coli, whose virulence had been artifically enhanced, did the immunity rise to the order of 1,000 minimal lethal doses.

4. In experiments involving over 7,000 animals, no protecting substance of unique value was found. The best protecting agents were the irritative ones, such as the vaccines, potent sera, bactragen, or aleuronat and starch mixture.

5. In dogs with generalized peritonitis following artifically produced acute gangrenous perforated appendicitis, the immunity afforded by preoperative intraperitoneal injections of the best of the protecting agents was not sufficient to lower the mortality.

6. In a parallel series of dogs, however, postoperative enteral administration of the sulfonamide drugs, especially sulfathiazole, was followed by a striking lowering of mortality. Intraperitoneal use of these drugs was less effective.

7. On the basis of this evidence we recommend the use of the sulfonamides clinically but do not recommend the use of preoperative injections."—LeRoy D. Long.

"THE USE OF ESTROGENS IN THE TREATMENT OF DYSURIA AND INCONTINENCE IN POSTMENOPAUSAL WOMEN." Udall J. Salmon, M.D., Robert L. Walter, M.D., and Samuel H. Geist, M.D., New York, N. Y.: American Journal of Obstetrics and Gynecology, November 1941, Vol. 42, No. 5, Page 845.

"1. Sixteen postmenopausal women with urinary symptoms (urinary frequency, urgency, and incontinence), which were refractory to orthodox treatment, were found to have an estrogen deficiency.

2. Acting on the assumption that the urinary symptoms were related to the estrogen deficiency, these patients were treated with estrogens.

3. Relief of symptoms was achieved in all but three cases.

4. Relief of symptoms ran parallel with evidence of estrogenic effect in the vaginal smears.

5. Symptoms recurred gradually after the discontinuation of therapy, coincident with the re-appearance of signs of estrogen deficiency in the smears.

6. Patients could be kept symptom-free on a maintenance dose of estrogens.

7. One the basis of the observations reported here, it is concluded that: (a) a syndrome consisting of urinary frequency, dysuria, and incontinence in elderly women can be caused by a long-standing estrogen deficiency; (b) in advanced stages, the estrogen deficiency leads to atrophic erosions of the mucous membrane of the urethral meatus similar in appearance to the erosions in "senile vaginitis;" this "senile urethritis and periurethritis" causes urgency, painful micturition, and frequency; (c) the estrogen deficiency also leads to impairment of the bladder sphincter function which results in incontinence.

8. It is suggested, on the basis of these observations, that postmenopausal women, upon whom vagino- or urethroplasty is contemplated for the relief of incontinence, whether or not a cystocele or urethocele is present, be examined for evidence of estrogen deficiency, and, if such a deficiency is found, that they be given a full course of estrogens as a therapeutic trial."

COMMENT: This is a well conducted study on a small group of patients with a fairly common and usually discouraging group of symptoms. Their results have been excellent. Though I have undertaken this form of treatment for this particular group of symptoms in only a few patients recently, I have observed improvement in urinary incontinence, urgency, and frequency, in a fairly large group of women who have been treated for senile vaginitis by the use of estrogens.—Wendell Long.

"ECTOPIC PREGNANCY." Goodrick C. Schauffler, M.D., and Frederick O. Wynia, M.D., Portland, Oregon: American Journal of Obstetrics and Gynecology: November 1941, Vol. 42, No. 5, Page 786.

"1. Sixty-five cases with the pathologic diagnosis of ectopic pregnancy are reviewed. For the report some general considerations are omitted in favor of the more pertinent and timely aspect of the problem.

2. The impression that previous operations, abortions, and pelvic infection contribute to the incidence of ectopic pregnancy is supported by our findings.

3. Hematology and blood pressure observations support generally accepted conclusions. Our experience with transfusion parallels that of most other observers. Autohemoclysis, as an emergency measure, has been used with consistent benefit, where more suitable blood is not available.

4. In 28 cases surgery other than removal of the ectopic pregnancy was performed but not in the presence of infection or free bleeding. Those patients did exactly as well as the rest of the group. It is thought that this surgical attention may account for the fact that no second ectopics are recorded (28 percent sterilized). Other reported incidence is 3.6 to 22 percent.

5. Our mortality rate is three percent. Diagnosis was 80 percent correct. The routine use of the Friedman test has improved our percentage of correct diagnoses.

6. Seventeen endometriums were available for pathologic examination. Had these tissues been obtained by curettage, diagnosis would have been assisted in only six out of the 17 and definitely confused in the remainder.

7. Microscopic examination of the tubes and other tissues indicates some further basis for the hypothesis of ectopic placentation in areas of ectopic endometrium or decidua.

8. Cul-de-sac puncture has been harmless and exceedingly valuable in diagnosis. The peritoneoscope has been used. Its status is discussed.

9. Three unusual cases are reported and illustrated."

COMMENT: This article is abstracted not because of any unusual features but because it is a comprehensive and clear review of the unselected group of patients with ectopic pregnancy. Though a relatively infrequent disease, ectopic pregnancy is an important one from a practical diagnostic point of view because this diagnosis must be considered in the differential diagnosis of a great many very common pelvic conditions.—Wendell Long.

"PELVIC PAIN." Robert D. Mussey, M.D., and Robert B. Wilson, M.D., Rochester, Minnesota: American Journal of Obstetrics and Gynecology, November 1941, Vol. 42, No. 5, Page 759.

"This follow-up study of pelvic pain was attempted with the full realization that pain is not a diagnostic entity and that treatment or operation is ordinarily carried out for the relief of any one symptom, such as pain. However, it seemed to be desirable to know the percentage probability of relief of pain associated with various pelvic disorders."

Four or more years following examination of them in 1936, questionnaires were sent to 500 patients included in a previous study of pelvic pain. Each patient was asked whether the pain was completely relieved, partly relieved, or not relieved. Replies of 310 of the 500 questionnaires form the basis of this report.

Of the 310 patients, 193 complained primarily of lower abdominal pain while the remaining 37.7 percent complained of backache or menstrual pain, or they made multiple complaints.

Of the 310 patients, 131 were subjected to surgical operation with complete or partial relief of the pain in 104 or 79 percent.

The remaining 179 were treated by non-surgical medical measures with complete or partial relief of the pain in about 66 percent.

"When a reasonably accurate diagnosis is made of pelvic lesions which cause pain and which are amenable to surgical measures complete or partial relief of pain may be expected in 79 percent of cases, depending on the condition and the nature of the operation.

Nonsurgical lesions or pain for which organic cause is not found, may be relieved in not more than 66 percent of cases; in this group fall a considerable number of patients, about a fourth of all patients who complain of pelvic pain, who have no demonstrable organic lesion or who suffer from varying degrees of chronic nervous exhaustion. The scientific integrity of the physician is best maintained by his explaining to this type of patient, who is difficult to satisfy and reassure, the physiologic basis of her pain."

It is interesting to note that of the 54 patients complaining of backache, only six were subjected to surgical operation. This correctly reflects the present attitude about backache and its relatively infrequent cause by surgical disease of the pelvic genitalia.

COMMENT: This is a valuable contribution from a practical point of view. While it is true that pain is not a diagnostic entity, pain is a symptom for which many women seek relief and it requires the most meticulous care of the physician to obtain an accurate interpretation of the pain and after this is done, it demands sound judgment to advise and administer the proper treatment whether it be surgical or nonsurgical.

This review demonstrates that such care in interpretation and such judgment in treatment was employed. In addition, it sets forth the results of such careful interpretation and treatment. Despite the fact that this study represents only 310 of the 500 patients to whom questionnaires were sent, it is reasonably accurate and demonstrates the caution with which the treatment of pain in the pelvis must be undertaken.—Wendell Long.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
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"THE RELATIONSHIP BETWEEN DISEASES OF THE UPPER RESPIRATORY PASSAGES AND THE SURGERY OF THE CHEST." F. C. Ormerod. London. The Journal of Laryngology and Otology. August. 1941.

According to the author the relation between abscess of the lung and operations on the tonsils has been a matter of knowledge and discussion for the past 30 years.

Richardson in 1912-1913 was the first to discuss lung abscess as a sequalae of tonsillectomy.

Chevalier and Chevalier Lawrence Jackson in 1933 expressed the opinion that the postoperative lung infection was embolic or pyaemic in origin and never due to aspiration.

Myerson in 1922 reported the results from 100 cases of bronchoscopic examination immediately following a tonsillectomy. Blood was found in the trachea in 76 cases.

Iglauer in 1928 found blood in the traches after tonsillectomy in 40 percent of the cases after general anaesthetic and in 38 percent of the cases after local anaesthetic.

Ochsner and Nesbit in 1927 showed that the lymphatics draining the tonsillar region empty directly into the venous system at the junction of the internal jugular and subclavian veins and therefore infection could not pass directly to the lungs by the lymph stream.

The author names the four obvious tracts for connection between the upper and lower respiratory: 1. Aspiration. 2. Lymph stream. 3. Blood stream. 4. Direct continuity. He says that on the whole the aspiration theory seems to be the most obvious, the blood stream or embolic route being responsible possibly for a number of cases. The lymphatic route may account for an occasional case. Broncho-sinusitis disease and its sequalae may explain many cases of bronchiectasis though probably not abscess in the lung.

"BLINDNESS, AS RECORDED IN THE NATIONAL HEALTH SURVEY:" Amount, Causes and Relation to Certain Social Factors. Rollo H. Britten, senior statistician, U. S. Public Health Service. Public Health Reports, vol. 56, No. 46, page 2191-2215, November 14, 1941.

In the National Health Survey, special consideration was given to the subject of blindness. The National Health Survey was a house-to-house canvass of many urban families in 18 states. The analysis is confined to 2,498,180 white and colored persons in surveyed urban areas. The extent of this survey lends particular value to the findings on blindness. From the nature of the survey and its methods it may be assumed that the cases of blindness recorded represent persons who were totally blind or had vision sufficient merely to distinguish between light and dark.

The number of persons per 100,000 recorded as being blind in both eyes was 83, the number of blind in one eye only 326, and the number blind in one or both eyes 409. The prevalence of blindness was greater among males than among females, the difference being particularly marked for blindness in one eye only. More than one-fourth of all the blind were over 75 years of age; two-thirds were over 55 years of age. Practically all were past or within the working ages. Among children the rate was 12 per 100,000 for blindness in both eyes and 86 per 100,000 for blindness in one or both eyes. In each succeeding age group there was found a marked increase in the rate, which reached the extreme figure of 2,918 (both eyes) and 6,630 (one or both eyes) among persons 85 or more years of age. According to the statistics there is an estimated annual incidence of new cases of blindness (both eyes) of 6.6 per 100,000 population. The males showed a higher annual incidence of new cases in both eyes up to about 70 years of age; above that age the incidence was greater among females.

Accident was recorded as the cause of blindness in one-sixth of the cases of blindness in both eyes and in one-half of the cases of blindness in one eye only. The remainder may perhaps be ascribed to disease and to congenital causes or causes associated with early infancy. Cataract, glaucoma, or other diseases of the eye were recorded as the cause in more than half of the cases of blindness reported as due to disease. Degenerative disease was the major cause for diseases which did not originate in the eye. Syphilis and gonorrhea did not appear in the list of causes on account of the public nature of the survey.

Further analysis of blindness by accident showed that more than a third of the cases were results of occupational accidents. A fourth of all cases of blindness in both eyes and a third of all cases in one eye only which were caused by accidents were due to home accidents. As a cause of blindness in both eyes, cataract ranks first, whereas for blindness in one eye only, occupational ac-

cidents ranks first; second position is held by degenerative diseases and home accidents, respectively; third position by glaucoma and cataract, respectively. For blindness in both eyes, falls, motor vehicles, burns, and firearms and fireworks were the principal means of injury; for blindness in one eye only cutting and piercing instruments were by far the most important means. It was found that the higher rate of blindness in males is due to the greater frequency of accidents among them. The prevalence of blindness due to accident was about five times as great among males as among females. It was also proved that accidents are more frequent causes of blindness in the younger ages and diseases in the older ages. Sixteen percent of the cases of blindness in both eyes were due to accident; for blindness in one or both eyes the percentage was 42.

Blindness was much more prevalent in the colored than in the white populations, the rates being respectively 146 and 76 per 100,000 for blindness in both eyes. Blindness had a higher incidence rate in cities under 100,000 population than in larger cities. Two-thirds of the blind were in families with annual incomes under $1,000. Ten percent of the blind were reported as being employed. The prevalence of blindness (both eyes) was relatively low among the employed workers, a large proportion of the blind being in the "unemployable" group. Nearly two percent of the "unemployable" males, aged 15-64, were blind in both eyes.

"CARDIOSPASM: OBSERVATIONS ON THE USE OF PROSTIGMINE:" a clinical and experimental report. Jacob Meyer and H. Necheles. Chicago. The Journal of Laboratory and Clinical Medicine, volume 27, Number 2, page 162-168, November 1941.

The accepted therapy for cardiospasm in the past has been (a) gastric lavage; (b) dilation of the cardia; (c) the use of antispasmodics. Psychotherapy, diathermy, and vitamin B1 have been reported to be of value. These mensures have been effective to a degree in relieving the patient of discomfort and in improving his general nutrition. The esophagus has in most instances remained the same size, and patients have had recurrent symptoms but with a minimum of discomfort despite a large esophagus.

Much evidence has accumulated recently to show that cardiospasm is often related to damage to vagus fibers or to damage and loss of ganglion cells of the myenteric plexus of the esophagus at the cardia. In accordance with this theory, recently, intractable cardiospasm has been relieved successfully by bilateral cervicothoracic sympathetic ganglionectomy. This may be considered as proof of sympathetic "achalasia."

On the basis of the same theory, assuming that achalasia or cardiospasm is a condition in which degenerative changes have taken place in the myenteric plexus of the lower esophagus, through which the parasympathetic nerves effect normal peristalsis, drug therapy for achalasia and megaesophagus can be elaborated. Drugs that affect the parasympathetic system may be used to produce increased tonus and peristalsis of the esophagus. In the present experiments, eserine and prostigmine were employed, the latter being the drug of choice because it lacks the disagreeable by-effects of the former.

The authors observed a 21 years' old female patient with cardiospasm for over two years. During this time, prostigmine was administered for a period of time, and again withheld. When the prostigmine was withheld, the patient would return with more complaints and ask that the drug be continued. This was true even though she had had periodic dilatation of the cardia. The patient had been dilated previously at other institutions, but she had not experienced the same degree of improvement as from prostigmine and dilatation. She had also undergone an extensive course of psychotherapeutic treatment at another institution with no apparent improvement.

To the same patient, under fluoroscopic observation a barium meal was administered and one mg of prostigmine was injected intramuscularly. Fifteen minutes later, increased peristalsis and tonus were observed. The increased contractions of the esophagus were particularly marked above the cardia, and the barium meal was emptied rapidly into the stomach. Injection of ergotamine into another patient likewise revealed increased tonus and peristaltic rate of the esophagus.

Experiments on anesthetized dogs confirmed the observations made on the patients and further reveal that the prostigmine acts not only through stimulation of the parasympathetic innervation of the esophagus, but also through a direct effect on its musculature.

It seems therefore logical to give prostigmine or ergotamine for the treatment of cardiospasm. It is a promising method of treatment of this condition. The prostigmine may be given in doses of 15 mg three times daily for several weeks. It can be given intermittently for several years. The method is best combined with local dilatation of the cardia.

"THE GENERAL PRACTITIONER'S PART IN THE CAMPAIGN FOR THE PREVENTION OF BLINDNESS FROM GLAUCOMA." Mark J. Schoenberg. New York. New York State Journal of Medicine, volume 41, Number 22, page 2216-2219, November 15, 1941.

Out of hundreds of thousands of ambulatory patients daily consulting medical practitioners throughout this land, at least 30 percent are 40 years of age or more. It is within this age group of patients that one has to look for the present and future glaucoma victims. Patients afflicted with glaucoma are potentially victims of partial or total loss of sight. It is estimated that there are approximately 200,000 blind persons in this country, of whom over 20,000 are blind from glaucoma. The general practitioner is the first usually to have an opportunity of detecting or at least suspecting the presence of glaucoma at an early stage. Suspecting the glaucoma, the general practitioner is in the position to direct his patient as soon as possible to ophthalmologists or eye clinics for checkups.

The author gives six points the investigation of which frequently suffices to obtain enough evidence to detect or suspect the existence of glaucoma:

1. Measure the acuity of vision. The cause of subnormal vision of one or both eyes must always be investigated.

2. Examine the size of the pupils and their reaction to light. Inequality of pupils or poor reaction to light is not to be ignored.

3. Feel with the fingers whether the eyes are normally soft or hard. One can acquire this "feel" by instruction and practice.

4. Examine each eye with the ophthalmoscope and find out whether the optic disks are pale or excavated.

5. Ask the patient about the occurrence of occasional blurring or clouding of vision, seeing rainbow rings around a distant light, one-sided headaches, discomfort in or around the eyes after movies, excitement, and worry. Inquire whether the patient experiences difficulty in reading in spite of recently prescribed glasses.

6. Ask whether there is a case of glaucoma in the family.

The glaucoma problem is one of growing importance, for it is probable that its incidence is rapidly increasing. In great part this is due to the rise in the population age group of those over 40 and to the strain and worry to which a large part of the adult population has been subjected in recent years. It is of the utmost importance to make a concerted move to attack this problem. To do this it is essential to get the cooperation of all physicians practicing medicine in adults.

There is for instance the acute glaucoma, which has a stormy beginning and runs a stormier and exciting course. It is characterized by excruciating pain in and around the eye, almost complete loss of vision, one-

sided headaches, nausea, vomiting, dilatation of the pupil, and cloudy cornea. Occasionally, the inexperienced physician may think he is dealing with a gastric upset or iritis. And yet, the diagnosis is simple; loss of vision, hardening of the eyeball, congestion, and cloudy cornea are parthognomonic of acute glaucoma. Immediate action can save the eye from blindness. The diagnosis of chronic glaucoma, particularly the noncongestive type, offers many difficulties to the general practitioner. Relatively few cases can be uncovered by him in the earlier stages. However, if he becomes conscious of the frequency of glaucoma and knows its symptoms, great progress can be made in diagnosing many cases before too much irreparable damage has been done.

"THE PROBLEM OF TRACHEOTOMY IN LARYNGEAL SUFFOCATION IN CHILDHOOD." Rene Mayoux. Le Journal de Medicine de Lyon, volume 22, Number 522, page 421-423, October 1941.

Laryngeal suffocation which is not the result of diphtheria is the most frequently due to subglottic edema. In France, it is the general practice that the physician waits with the tracheotomy until there is an urgent need for it, when the dyspnea is great and when pulmonary complications can be still prevented. In America, tracheotomy is done at a much earlier stage of the disease, and its purpose is not only to make the glottis permeable by a metallic tube but also to render the aspiration of secretion from the bronchi possible. According to Chevalier Jackson, aspiration of the secretion which obstructs the bronchi is an indispensable complement of any tracheotomy. Le Mee also recommends bronchial injection of a sodium borate solution in order to stimulate the work of the ciliated epithelium of the bronchi. Thus, in the American practice, tracheotomy is not a palliative operation performed in emergency cases, but a truly curative therapeutic measure that may prevent the pulmonary complications in cases of suffocating laryngitis.

Formerly it was thought that such children die from bronchopneumonia. In fact, there is rarely a bronchopneumonia; the physical signs are caused by atelectasia of the lungs, which is a result of bronchial obstruction by accumulated secretion. Formerly, physicians even thought that tracheotomy may cause pulmonary complications. Now, we know that the contrary is true: by early tracheotomy, it is possible to prevent the development of pulmonary complications.

Considering the French view and the American view, one wonders which to accept. The author reports several cases which are evidently opposite to the American doctrine on tracheotomy and its therapeutical effects. There were five children: two recovered, and three died. The autopsy found no secretion in the trachea or the bronchi. In one of the fatal cases, repeated attempts were made to aspirate bronchial secretion through the tracheotomy tube, but only a small quantity of mucus was removed, without any improvement in the patient's dyspneic condition. It is also true that in none of the fatal cases was bronchopneumonia found, and the histological examination showed leukocytes and fibrine in the alveoli, and pus in the smaller bronchi. It almost seems that the tracheotomy and the endobronchial medication in the three fatal cases aggravated the pulmonary lesions.

The truth is that there are different types of suffocating laryngitis. The types may vary according to the nature of the epidemic and, even according to geopathological factors. There is the disease described by Chevalier Jackson and others under the term of tracheobronchitis fulgurants. Though the dyspnea is the same as in suffocating laryngitis, and the clinical aspect of the disease is only slightly different, the tracheobronchitis is entirely different from suffocating laryngitis. It is characterized by the presence of abundant exudates and edema in the trachea and the large bronchi—but this is not a laryngitis. Here, the only effective treatment is tracheotomy followed by aspiration. And an early tracheotomy is imperative. The recognition of this new disease, and the existence of an effective therapeutic measure for it makes it necessary to examine the larynx with direct laryngoscopy in all cases of suffocating laryngitis: detection of abundant secretions, with congestion or edema of the tracheal mucosa indicate an immediate tracheotomy. The disease is rare in France.

The types of suffocating laryngitis observed in France, and occuring in the course of measles, grippe, or spontaneously, are two. In one type, the laryngeal lesion and the subglottic edema constitute the entire disease. This type is easily cured, and tracheotomy is rarely if ever necessary.

But, beside this purely local form, there is also a rather severe type of suffocating laryngitis. There are two essential factors in death from suffocating laryngitis: the intensity of the toxi-infection, and the bronchopneumonia. The pulmonary changes are usually not secondary to the laryngitis: they develop simultaneously with the laryngitis as seen in the "grippe" of the entire respiratory tract. In this type, the role of bronchial obstruction, and of atelectasis is of little significance, and patients with this type of suffocating laryngitis cannot be saved by tracheotomy.

PLASTIC SURGERY

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"HUMAN BITES OF THE HAND." Harry Miller, M.D., and James M. Winfield, M.D. Surgery, Gynecology and Obstetrics, Vol. 74, Feb. 1, 1942, No. 2.

Experience in many communities has yielded abundant proof of the danger which attends neglect of wounds contaminated with human mouth organisms. As the concomitant sequelae and resultant functional disturbances are often of a most serious nature, the importance of the correct management of the early and late human bite lesions cannot be over-emphasized. There is a definite tendency for these infections, when once established, to extend and to invade into deeper and more vital structures, the lesions rapidly becoming foul smelling, necrotizing, and resistant.

The organisms implanted in the tissues of the hand are often most virulent. The part played by such anaerobes as the fusiform bacillus and the spirochete of Vincent has been repeatedly pointed out. Although these organisms are not always demonstrable in cultures and smears from human bite wounds, dark field examination of fresh wet smears will demonstrate their presence in a higher percentage of instances. Anaerobic cultures observed over a period of seven to ten days will often yield much information. Streptococci and staphylococci alone and in symbiosis, as well as other contaminants such as the colon bacillus, various fungi, and occasionally the Spirocheta pallida play an important role in producing and prolonging these necrotizing infections.

In order to gain a lucid concept of the problems involved in the prophylaxis and treatment of these lesions one must appreciate the anatomic complexity of the tissues which predisposes to extension of infection rather than to localization, particularly under conditions of neglect, as well as the low resistance of fibrous connective tissue and cartilage, to infection.

A knowledge of the mechanism of production, the usual sites of injury, the extent and depth of the lesion, and the possible course of extension of the infection is of considerable aid in the intelligent management of these cases.

Human bite injuries usually occur during the course of fist fights or drunken biting brawls. Consequently, the lesions range from actual bites of the phalanges and hand to puncture wounds and lacerations produced by a fist striking exposed teeth. When the closed fist is used

in striking a blow the knuckles of the second and third metacarpals receive the major force of the impact. This is primarily due to the fact that these bones are longer and stronger than the other metacarpals and, furthermore, they are more immobile. In this position the dorsal ligaments, extensor tendons, and skin are tightly stretched across the metacarpal, and will easily cause a sharp, resisting surface to penetrate the joint cavity or to damage underlying structures.

A more rare mechanism, that of the sucking of hangnails or of clean lacerated wounds by the patient or a concerned bystander, will account for contamination with mouth organisms in a small number of cases. One of the patients included in our group of late infected cases acquired a severe infection following the biting of a hangnail.

In regard to the extent and depth of the lesion, the injury may present itself as: (1) a simple abrasion over the phalanges, knuckles, or palmar surface of the hand or wrist, involving only the epidermis; (2) a complete avulsion of segments of skin, subcutaneous structures and occasionally of bone; (3) a penetrating laceration either partially or completely severing the extensor tendon; (4) a wound which may have opened into the dorsal subcutaneous space, subtendinous bursa, dorsal subaponeurotic space, or the joint cavity.

In 1930, Mason and Koch published a paper on human bite infections of the hand in which they demonstrated experimentally the lines of spread of infectious agents from the region of the metacarpophalangeal joint. This paper has been unsurpassed in the presentation of essentials and remains the outstanding contribution on this subject.

Obviously, abrasions and avulsion lacerations offer little opportunity for the establishment of an anaerobic infection. Lacerations, however, which have penetrated the subcutaneous layers and opened into the subtendinous tissues and joints, present ideal conditions for the production of fetid, necrotizing infections because of the relatively anaerobic conditions, the low resistance of fibrous tissue and synovial membranes, the anatomic complexity of structures favoring the spread of infection, and the presence of traumatized tissue. Consequently, the infections occurring on the dorsal aspect of the hand in and about the metacarpophalangeal joint potentially and actually carry the graver prognosis. Because of the shift of tissues particularly about the knuckles, infection may be carried from an original point of entrance to a relatively distant area.

Infection occurring from an injury over the proximal phalanx may extend both superficial and deep to the expansion of the extensor tendon. From this position it may extend along the lumbrical and interosseous tendons to involve the lumbrical space.

Laceration of the extensor tendon with the implantation of infection but without penetration into the joint may occur. Here the extension of infection will be extracapsular and subtendinous, the subtendinous bursa and subaponeurotic space becoming contaminated. Should the joint be infected infection may penetrate into the subtendinous bursa and subaponeurotic space as well as under the expansion of the extensor tendon over the perimal phalanx from which point infection will travel, as described, namely, to the lumbrical canal and large fascial spaces in the palm of the hand.

The dorsal subcutaneous space is usually involved early. This follows subcutaneous penetration with or without laceration or displacement of the tendon or extension into the joint.

The flexor tendons and their synovial sheaths are rarely invaded from behind. A dense fibrous sheath and the accessory volar ligament serve as an adequate barrier. Late in the course of infection, especially in neglected cases, the flexor tendon sheaths may be invaded.

Believing the results obtained by those surgeons using chemical and electrocautery methods in the primary treatment of early human contaminated wounds are not entirely satisfactory, we have followed in our clinic the suggestion made by Mason and Koch in 1930 of cleansing the wound with soap and water combined with gentle debridement. The recognition of early human bites as such is often quite difficult. Falsification of history is common especially in the white patient, and often results in contraindicated primary suture. A definite and comprehensive regimen has been developed, comprising a searching history, complete examination, and treatment.

The routine treatment employed is as follows: The area about the wound is gently washed with soap and water for five minutes following which the wound itself is thoroughly washed with soap and water and irrigated with saline for a further period of ten minutes. Following this procedure, the edges are gently retracted and the lesion examined, in order to determine the extent of injury if possible. These wounds are not probed since the information obtained is meager and the danger of carrying infectious agents more deeply into the tissues is great. Following mechanical cleansing and a very limited debridement, wet dressings are applied. No attempts are made to repair the rent in the joint capsule. Hands are splinted in the position of function. Lacerations are never sutured nor are injuries to deeper structures repaired. The major catastrophes in our series have occurred in those cases in which wounds were primarily sutured. Patients return daily for examination and if there is joint involvement, are usually hospitalized. In certain of the initial cases in this series patients were observed and treated in conjunction with Dr. R. E. Speirs who has reported these previously. A total number of 61 early human bites of the hand have been given prophylactic treatment during the past three years. All patients seen within four hours after the occurrence of injury were considered early cases. Friedrich has pointed out that a lag phase of six hours exists before organisms contaminating a wound become acclimated to the human tissues. This lag phase in the case of organisms transfered from the human mouth is greatly shortened and there may be only a brief interval before the organisms are accustomed to their new environment. Those cases already presenting swelling and evidence of infectious extension were not included in this series of early cases even if patients were seen within the four hour period and were considered as late cases.

The accompanying table illustrates an interesting grouping of these injuries. It will be noted that 34 lesions involved the fingers while 18 occurred in the region of the knuckle. Of the total number of cases, five showed mild inflammatory reaction characterized by swelling and tenderness without suppuration and only one gave evidence of gross infection. Two of the knuckle injuries exhibiting inflammation had been sutured primarily due to falsification of history but the sutures were removed almost immediately and the wound treated as a human bite. One of the compound fractures with the tip of the terminal phalanx completely bitten off showed mild inflammation. The compound fractures were usually hospitalized for a short period. The case referred to in the footnote was a most extensive injury, the fifth finger having been almost completely bitten off at the base of the proximal phalanx, tooth injuries of the third and fourth metacarpophalangeal joints and three lacerations over the dorsum of the hand. It was necessary to remove the fifth finger. The third and fourth metacarpophalangeal joints became stiff and the dorsal skin sloughed requiring a subsequent graft. Obviously, gross suppuration occurred in this hand, but we were able to save the major portion of the hand and to obtain a fair functional result. In none of the early cases, except the last mentioned, was it necessary to resort to amputation.

A more complete analysis has been made of the last 27 cases. In this group ten were knuckle injuries, five of these occurring on the third right knuckle and one on the third left knuckle. Two occurred on the second right

knuckle. Of the 17 finger injuries, the first, second, and fifth right fingers were most commonly involved. There were ten extensor tendon lacerations and one flexor tendon laceration. The metacarpophalangeal joint was known to be entered in three instances, but no doubt lacerations involving the joint were more frequent than this, as the positive determination of the extent of the injury in this region is often difficult to ascertain.

Over 60 percent of the cases were between the ages of 15 and 25 years, 18 being males, nine females: 19 were colored, and eight white. Of 22 cases the functional result in 20 was excellent, good in one, and poor in one (cases described previously).

The average wound healing time for the whole series of 61 cases was 8.5 days and for the group of 27 cases 9.9 days.

The after-care consisted essentially of splinting and the application of continuous saline, boric acid, or magnesium sulphate soaks for a period of 48 hours. The wet dressings were discontinued at this time if the wounds remained clean. Splinting was continued to complete healing.

This relatively simple course of management of early human bite injuries has given results which have been most gratifying. Unfortunately, the patient, when first seen often has a fully established infection, and regardless of the adequacy of treatment, frequently is condemned to a prolonged illness which may result in loss of parts and occasionally in loss of life.

In marked contrast to the prophylactic treatment and management of the early human bite injuries, is the therapeutic problem presented by the late infected human bites. These wounds are already in serious conditions, and sometimes extensively infected. As in other infections of this type, adequate surgery is essential with emphasis on somewhat earlier and more radical drainage. In general, the basic principles enunciated by Kanavel, Koch, Mason, and others relative to the treatment of established hand infections should be adhered to scrupulously. It should be unnecessary and is obviously impractical to outline the treatment in the most minute detail. Suffice it to say, that under general anesthesia, and in a bloodless field, the hand is throughly cleansed with soap and water. Then an extremely careful, meticulous debridement is performed, with removal of as much infected, gangrenous sloughing tissue as possible, and in addition with adequate drainage for all areas of infection. Definite mention should be made regarding metacarpophalangeal joint infections. The joint capsule should be opened transversely by one to a 1.5 centimeter incision which usually gives sufficient drainage. As has been pointed out earlier in the paper, infections of this type when implanted in certain regions may characteristically spread along certain lines to involve adjacent or deeper structures. The deepest anatomic plane involved should be inspected, as the infection may spread along the lowermost plane. Infection of the joint, if adequately drained, does not always result in a completely ankylosed joint as in many instances excellent function is obtained. An understanding of the pathogenesis of the advance of infection is essential to the correct surgical management of these severe infections, since it is only by locating those areas of greatest potential danger and recognizing the presence of infection that the lesion can be intelligently and satisfactorily managed. One should be slow to amputate extensively infected fingers but extensive drainage of the soft parts is essential. Often a useful part may be preserved or if amputation later becomes necessary, more of the extremity may be saved. Amputation should be avoided in the presence of an acute infection.

The wounds are then loosely packed with vaseline gauze and usually massive wet dressings are applied. A considerable variety of antiseptic solutions have been employed. In addition to saline, boric acid, and magnesium sulphate solutions, we have utilized and rather favor the use of Dakin's solution; it being our impression that the wounds remained cleaner and that sloughs separated more readily with consequently better drainage when the latter solution was used. Hydrogen peroxide, potassium permanganate, and chromic acid solutions also were used without notable success. Zinc peroxide, arsenicals, and sulfanilamide did not produce strikingly favorable results. The fingers, hand, and arm are then splinted and put at rest in the position of function and whenever possible arranged so that the position will favor dependent drainage. It is our belief that practically without exception cases of this type should be hospitalized. A Wassermann should be done in all patients presenting human contaminated lesions.

As has been stated, the initial injuries in the late infected cases occurring in the region of the knuckle outnumbered those of the finger. In 34 of the 54 patients the knuckles were involved, 15 occurring over the third metacarpophalangeal joint, the others scattered and of the group of 34 cases, the joint cavity itself was infected in 19 instances. There were 19 cases with lesions of the fingers 16 injuries being on the dorsal surface, and three on the volar surface. In six cases the middle interphalangeal joint was involved. As might be expected, partial or complete laceration of extensor tendons occurred in 18 cases and in only six were the flexor tendons partially severed. There was one case presenting a laceration of dorsum of the hand alone.

In several cases there was multiple involvement of joints, fascial spaces, and tendon sheaths. However, in 12 cases infection was confined to the dorsal subcutaneous space and in 21 cases both the dorsal subcutaneous and the dorsal subaponeurotic space was infected. Infection of the midpalmar space was present in three cases and this seems significant in that this space is not commonly involved in the usual hand infection. In one case infection extended from an involvement of the index flexor tendon and its sheath to the thenar space. In another case the ulnar, radial bursa, retroflexor space, and bones of the wrist and hand became so severely infected from a knuckle lesion that amputation through the forearm was required. From an original focus at the metacarpophalangeal joint, infection spread to the lumbrical spaces in nine cases. Thirteen cases of a total 48 developed stiff fingers and five cases amputation of parts was required, in one of which it was necessary to perform amputation through the forearm.

In spite of the severity of these infections, the average length of healing was 34 days and 9.4 was the average number of hospital days. No fatalities occurred in this group of cases.

As has been noted in the literature, these infections are prone to recurrence and frequent exacerbations. In our series there were three such instances, one in three weeks, one in two months, and one in three years' time.

Since instituting the described management of early human bite lesions, the number of late cases admitted to the hospital have been definitely fewer in number. For a short interval during a change in the resident staff, the late infected cases increased, and it was found that the treatment of the early cases was not being carried out as outlined.

The careful evaluation of results in the treatment of human bite infections is difficult because of the variations in the virulence of the contaminating organisms and the resistance of tissue. The criterion of the length of stay in the hospital is not a good index to the extent or severity of the infection. These studies have convinced us that good results in the treatment of human bite infections of the hands can be obtained only by attention to details and adherence to surgical principles. Careful cleansing and gentle handling of tissues have reduced our incidence of severe infections and adequate drainage, fixation of parts and irrigation are fundamental necessities in the treatment of the late infections.

Summary

1. The prophylactic treatment of early "human bite" injuries handled under the regimen of soap and

water cleansing, limited debridement, wet dressings, and splinting is simple and effective, the results obtained being superior or equal to those attained when actual or chemical cauterization was utilized.

2. The correct management of the "early human bite" cases has reduced the number of late infected cases and we feel that prompt and intelligent treatment of the infected cases has disabling and deforming sequelae.

3. In dealing with the late infected cases a clear understanding of the mechanism, depth of penetration, and degree of injury in relation to the spread of established infection is essential for adequate and correct surgical treatment.

Comment: Anyone who has treated cases of human bites of the hand will appreciate this fine article. The results speak very favorably for the treatment rendered. I believe every surgeon will find this abstract useful.

CARDIOLOGY

Edited by F. Redding Hood, M. D.
1200 North Walker, Oklahoma City

"INTERPRETATION OF BLOOD PRESSURE BEHAVIOR DURING PREGNANCY AND THE PUERPERIUM." R. A. Bartholomew and E. D. Colvin. (Condensed from American Journal of Obstetrics and Gynecology, 41: 646, 1941.)

The observation that hypertension complicates pregnancy, either early or late in gestation, is rightfully regarded as of serious significance. "Since it may indicate either vascular disease or true toxemia, differentiation of these conditions assumes much importance, not only in the management of the pregnancy, but in the final classification and ultimate prognosis of the disorder.

"It is our purpose to point out certain observations during pregnancy and the puerperium, which not only aid in interpreting the behavior of the blood pressure, but which will enable one to predict that a moderate rise in blood pressure will probably occur in the latter part of pregnancy. It is desired to emphasize, particularly, the value of retinal examination in the differentiation and management of true toxemia and vascular disease, and the importance and examination of the formalin-fixed placenta in the final classification of the disorder."

"Hypertension, present early in pregnancy or arising later in pregnancy, is interpreted on the basis of vascular disease or true toxemia according to the following behavior and characteristcs:

1. If, on retinal examination early in pregnancy, there is evident disturbance in the A-V ratio (ratio of diameter of arteries to veins), varying from 1 to 2 to 2 to 3, or 1 to 2 up to 1 to 3, 1 to 4 or more, it is evident that the pregnancy is complicated by vascular disease. The more marked the disturbance in A-V ratio, the earlier the onset of hypertension in pregnancy and the more marked the increase in light reflex and A-V conpressions. Hemorrhages and exudates are usually not seen unless the disturbance is severe and of long standing, with associated kidney involvement. Localized arterial spasms are not seen unless there is a superimposed toxemia.

"Hypertension due to true toxemia rarely occurs as early as the fifth month but becomes increasingly frequent after the seventh month. The A-V ratio is normal and the arterial spasms, at first sharply localized, become spindle-shaped and elongated with the increasing hypertension until, in severe cases, there is generalized constriction and the A-V ratio becomes much disturbed. Since the disturbed ratio is due to spasm rather than sclerosis, there is no corresponding increase in light reflex or A-V conpressions, which helps to rule out vascular disease.

2. Edema, headache and albuminuria are much less pronounced in vascular disease than in true toxemia with a comparable elevation of blood pressure.

3. Following the initial rise in blood pressure and appearance of albumin, subsequent observations at weekly intervals show very gradual increases in hypertension as compared to true toxemia. Superimposed true toxemia causes rapid increase in edema, headache, hypertension, albuminuria, and the appearance of acute placental infarcts.

4. The more severe cases of vascular disease, which occur much more frequently among colored than white women, usually show a striking and unexplainable response to rest in bed. One frequently observes a blood pressure of 180/100 return nearly to normal after several days' rest in bed. An immediate return to the former high level is noted when the patient again resumes the upright position, even though she carries on no physical exertion. These cases also show marked fluctuation in blood pressures from day to day for no apparent reason.

"In contrast to this behavior, hypertension due to true toxemia is not much influenced by rest in bed or indeed by any other measures. It remains persistently elevated and tends to increase. Edema may lessen with rest in bet but headache and albuminuria increase. Arterial spasms, at first sharply localized, become spindle-shaped, elongated, and finally produce generalized constriction. Hemorrhages in the retina may occur. Finally, examination of the formalin-fixed placenta shows the acute types of toxic infarcts.

5. The concentration test on the urine and the blood chemistry values are seldom affected in either vascular disease or toxemia of pregnancy, unless advanced cardio-renal disease or severe toxemia have seriously affected the kidneys. However, the uric acid value, which is usually normal in vascular disease, is definitely increased in toxemia, due probably to increased liver damage in the latter.

6. Hypertension and retinal changes due to vascular disease persist throughout the puerperium and show a gradual tendency to increase. This is likewise true of toxemia, if expectant treatment is followed, induction of labor delayed, and the patient subjected to long continued harmful effects on her vascular system and liver. In such cases, hypertension and albuminuria usually persist and subsequent observations show that the patient has acquired vascular disease. However, it is well recognized that marked hypertension due to fulminating toxemia, subsides quickly after spontaneous or induced labor, apparently leaves the patient none the worse for the experience.

7. Finally, examination of the formalin-fixed placenta from cases of hypertension due to vascular disease, shows no infarcts of the toxic types, namely the 'C', 'D', 'E' and possibly the 'B' types. If infarcts of these types are present, they are proof of the toxic origin of the hypertension."

Hence, in the examination of the retina and the formalin-fixed placenta, more accurate diagnosis and classification of cases of hypertension during pregnancy are made possible. When a distinct disturbance in A-V ratio is seen early in pregnancy, a warning is given of the probability of hypertension occurring in the latter part. "The extent of the increase and the stage of pregnancy at which it will appear are directly proportionate to the degree of disturbance in the A-V ratio. Examination of the formalin-fixed placenta serves as a check in the final classification of the nature of the hypertension. Type 'A' infarct (White) is nontoxic; Type 'B' (yellow) is usually associated with slight hypertension and albuminurial Type 'C' (brown yellow) is associated with moderate toxemia; Type 'D' (brown) is associated with severe toxemia and type 'E' (black) is associated with acute or fulminating toxemia. It must be remembered that true toxemia may be so mild that except for a slightly greater degree of albuminuria and edema, it may simulate the picture above described as due to vascular disease with slight disturbance in A-V ratio."

The authors predict that when the types and significance of placental infarcts are more generally recognized, and the value of retinal examination in pregnancy is appreciated, there will result not only more uniform statistics concerning pregnancy complicated by toxemia and vascular disease, but more rational management of pregnancy when complicated by these conditions.

ORTHOPAEDIC SURGERY

Edited by Earl D. McBride, M. D., F. A. C. S.
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"INSUFFICIENCY FRACTURE OF THE TIBIA RESEMBLING OSTEOGENIC SARCOMA." George E. Pfahler. The Amer. Jr. of Roentgenology and Radium Therapy. XLV. 209. 1941.

The author first reviews the literature and known facts concerning this type of fracture. He describes it as an incomplete fracture of the cortex of the bone, resulting from excessive strain and affecting just one side of the bone. In most cases the fracture line is not discernible in the roentgenogram until after a month or more. The first symptom is pain on exertion at the site of the lesion, often with early swelling due to edema, and with a later swelling caused by callous formation. The process is similar to that seen in the so-called "march fracture" of the metatarsals.

Since the pain and swelling with new-bone formation are often seen without the fracture line being visible, a diagnosis of osteogenic sarcoma is a natural mistake, and one which the author emphasizes as being a tragic one. Cessation of activity and weight-bearing will result in complete cure.

A case report with roentgenograms is also given.

"COXA PLANA, WITH SPECIAL REFERENCE TO ITS PATHOLOGY AND KINSHIP." H. Jackson Burrows. The British Jr. of Surg., XXIX. 23, July, 1941.

"1. Coxa plana proves histologically to be a condition of necrosis of bone followed by repair.

2. The necrosis differs from ordinary aseptic necrosis in showing lysis of trabeculae.

3. Infection cannot be excluded as a cause of the lysis, but is highly improbable.

4. The results of animal experiments suggest that the lysis is not due to arterial anaemia occurring in the special anatomical circumstances of the presence of bone in an envelope of cartilage.

5. A possible cause is some form of vascular disturbance other than arterial anaemia,—either venous obstruction or haematoma; the anatomical circumstances are such that either of these events might have profound results.

6. Recognition of the special pathological changes assists the accurate definition of 'osteochondritis juvenilis' occurring at sites other than the hip and the rejection of alleged examples which lack the essential criteria which might properly justify an analogy with coxa plana.

7. Recognition of histological criteria that the following are akin to coxa plana: osteochondritis of the tarsal scaphoid bone (Kohler's disease), of the metatarsal head (Freidberg's disease or Kohler's disease), and of the semilunar bone (Kienbock's disease).

8. On grounds of critical radiology, without histological information, it is probable that osteochondritis of the vertebral body in infants (Calve's disease) and osteochondritis juvenilis of the capitellum (Panner's disease) are further examples.

9. Other alleged examples of osteochondritis juvenilis, with one or two possible exceptions, probably belong to unallied conditions and are not analogous to coxa plana.

10. In assessing these conclusions, only the weight it deserves should be accorded to evidence based on identity of histological appearances or the results of animal experiments."

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
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"METABOLISM AND DIABETES"—Review of certain recent contributions. Edward H. Rynearson and Alice G. Hildebrand, Rochester, Minn. Archives of Internal Medicine, 68:134-75, July, 1941.

A summary of 128 published reports over the past year dealing with glycogen and carbohydrate metabolism, diabetes mellitus, Insulin and its modifications, hyperinsulinism, the pituitary gland, obesity and various subdivisions.

The mortality rate of diabetes in the United States has resumed an upward trend. There are probably 500,000 to 600,000 cases, and it appears that at the end of the present decade the figure will reach 1,000,000. The general conclusion has been that there is no evidence of trauma itself causing diabetes, although it may cause latent diabetes to be manifest. There is now considerable evidence that pregnant diabetic patients may have hormonal imbalance, and that toxemia may be prevented by replacement therapy . . . although diabetic children may have a disturbance of some other endocrine system, the only real facts available indicate that the only acknowledged deficiency is that of Insulin, and that many of the other changes are secondary. As yet there is no conclusive evidence that any one type of diet is suitable for every physician to prescribe. However, the majority of internists are prescribing diets which are higher in carbohydrates and lower in fat than those which were used previously.

There is unamimity of opinion that Protamine Zinc Insulin has a definite role in treatment, but little evidence that Crystalline Insulin has a much different effect than the unmodified type of Insulin used in past years.

There is increasing insistence that the term "hyperinsulinism" be reserved for those cases in which there is proof that the symptoms are caused by excessive production of endogenous insulin. Recent work on the pituitary indicates that affording the pancreas the benefit of physiologic rest improves diabetes by reducing strain on the remaining island cells, and also permitting restoration to function of some of the exhausted cells. If Insulin is given during the period of overwork diabetes may often be prevented.

The current literature on obesity is concerned chiefly with the extremely controversial subject of pathogenesis. It is considered to be either exogenous or endogenous. Supporters of the latter theory are not at all in agreement as to the site of disturbance.

"THE PATHOLOGY OF DIABETES MELLITUS." Shields Warren, Boston, Mass. New York State Journal of Medicine, 41:2432-36, December 15, 1941.

The pathology of diabetes mellitus is partly well understood and partly still confused. The lesions of the islands of Langerhans, particularly hyalinization and fibrosis, are adequate to explain some cases of the disease. Their experimental production in dogs and cats by anterior pituitary extract, apparently following the occurrence of hydropic degeneration of the insular cells, suggests the reality of the assumed relationship between the pituitary gland and the pancreas. Yet, the mechanism of production of hyalinization of the islands is still unknown. The occurrence of amyloid and paraamyloid reactions may be significant. Thus far, the significance of rather striking hyaline deposition in some functioning adenomas and carcinomas of the islands has not been determined.

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Noble	J. W. Francis, Perry	C. H. Cooke, Perry	
Okfuskee	J. M. Pemberton, Okemah	L. J. Spickard, Okemah	Second Monday
Oklahoma	R. Q. Goodwin, Okla. City	Wm. E. Eastland, Okla. City	Fourth Tuesday
Okmulgee	J. G. Edwards, Okmulgee	John R. Cotteral, Henryetta	Second Monday
Osage	C. R. Weirich, Pawhuska	George K. Hemphill, Pawhuska	Second Monday
Ottawa	J. B. Hampton, Commerce	Walter Sanger, Picher	Third Thursday
Pawnee	E. T. Robinson, Cleveland	Robert L. Browning, Pawnee	
Payne	John W. Martin, Cushing	James D. Martin, Cushing	Third Thursday
Pittsburg	Austin R. Stough, McAlester	Edw. D. Greenberger, McAlester	Third Friday
Pontotoc	R. E. Cowling, Ada	E. R. Muntz, Ada	First Wednesday
Pottawatomie	John Carson, Shawnee	Clinton Gallaher, Shawnee	First & Third Sat.
Pushmataha	P. B. Rice, Antlers	John S. Lawson, Clayton	
Rogers	W. A. Howard, Chelsea	P. S. Anderson, Claremore	First Monday
Seminole	H. M. Reeder, Konawa	Mack I. Shanholtz ,Wewoka	
Stephens	E. C. Lindley, Duncan	A. J. Weedn, Duncan	
Texas	L. G. Blackmer, Hooker	Johnny A. Blue, Guymon	
Tillman	C. C. Allen, Frederick	O. G. Bacon, Frederick	
Tulsa	H. B. Stewart, Tulsa	E. O. Johnson, Tulsa	Second & Fourth Mon. eve.
Wagoner	J. H. Plunkett, Wagoner	H. K. Riddle, Coweta	
Washington-Nowata	R. W. Rucker, Bartlesville	J. V. Athey, Bartlesville	Second Wednesday
Washita	A. S. Neal, Cordell	James F. McMurry, Sentinel	
Woods	W. F. LaFon, Waynoka	O. E. Templin, Alva	Last Wednesday
Woodward	M. H. Newman, Shattuck	C. W. Tedrowe, Woodward	